Member of: INDUSTRIAL LAUNDRY GROUP

OWNER'S MANUAL

50 Lb. Laundry Dryer

MODELS

GAS		STEAM	ELECTRIC
L36USS30G	L36URD30G	L36URS30S	L36URS30E
L36USD30G	L36URS30G	L36URD30S	L36URD30E

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THIS MANUAL MUST BE GIVEN TO THE EQUIPMENT OWNER.

MAN2050 (ECN5662) 8/99

IMPORTANT NOTICES—PLEASE READ

For optimum efficiency and safety, we recommend that you read the manual before operating the equipment. Store this manual in a file or binder for future reference.

WARNING: Purchaser must post the following notice in a prominent location:

WARNING: **For your safety, the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or death.**

- Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

- WHAT TO DO IF YOU SMELL GAS

- **Do not try to light any appliance.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Clear the room, building, or area of all occupants.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

WARNING: In the event the user smells gas odor, instructions on what to do must be posted in a prominent location. This information can be obtained from the local gas supplier.

WARNING: Wear safety shoes to prevent injuries.

WARNING: Purchaser must post the following notice in a prominent location:

FOR YOUR SAFETY
Do not store or use gasoline or other flammable vapors
and liquids in the vicinity of this or any other appliance.

WARNING: A clothes dryer produces combustible lint and should be exhausted outside the building. The dryer and the area around the dryer should be kept free of lint.

WARNING: Be safe, before servicing machine, the main power should be shut off.

WARNING: To avoid fire hazard, do not dry articles containing foam rubber or similar texture materials. Do not put into this dryer flammable items such as baby bed mattresses, throw rugs, undergarments (brassieres, etc.) and other items which use rubber as padding or backing. Rubber easily oxidizes causing excessive heat and possible fire. These items should be air dried.

WARNING: Synthetic solvent fumes from drycleaning machines create acids when drawn through the dryer. These fumes cause rusting of painted parts, pitting of bright or plated parts, and completely removes the zinc from galvanized parts, such as the tumbler basket. If drycleaning machines are in the same area as the tumbler, the tumbler's make-up air must come from a source free of solvent fumes.

WARNING: Do not operate without guards in place.

WARNING: Check the lint trap often and clean as needed but at least a minimum of once per day.

WARNING: Alterations to equipment may not be carried out without consulting with the factory and only by a qualified engineer or technician. Only **Manufacturer's** parts may be used.

WARNING: Remove clothes from dryer as soon as it stops. This keeps wrinkles from setting in and reduces the possibility of spontaneous combustion.

WARNING: Be Safe - shut main electrical power and gas supply off externally before attempting service.

WARNING: Never use drycleaning solvents, gasoline, kerosene, or other flammable liquids in the dryer. ***FIRE AND EXPLOSION WILL OCCUR. NEVER PUT FABRICS TREATED WITH THESE LIQUIDS INTO THE DRYER. NEVER USE THESE LIQUIDS NEAR THE DRYER..***

WARNING: Do not place items exposed to cooking oils in your dryer. Items contaminated with cooking oils may contribute to a chemical reaction that could cause a load to catch fire.

WARNING: Never let children play near or operate the dryer. Serious injury could occur if a child should crawl inside and the dryer is turned on.

WARNING: Never tumble fiberglass materials in the dryer unless the labels say they are machine dryable. Glass fibers break and can remain in the dryer. These fibers cause skin irritation if they become mixed with other fabrics.

WARNING: Before operating gas ignition system - purge air from natural gas or propane gas lines per manufacturer's instructions.

WARNING: To reduce the risk of electric shock, disconnect this appliance from the power supply before attempting any user maintenance other than cleaning the lint trap. Turning the controls to the OFF position does not disconnect this appliance from the power supply.

ATTENTION: L'ACHETEUR DOIT PLACER L'AVERTISSEMENT SUIVANT DANS UN ENDROIT CLAIR ET VISIBLE:

AVERTISSEMENT. Assurez-vous de bien suivre les instructions donnees dans cette notice pour reduire au minimum le risque d'incendie ou d'explosion ou pour eviter tuot dommage materiel, toute blessure ou la mort.

__ Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre apparell.

__ **QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:**

- Ne pas tenter d'allumer d'apparell.
- Ne touchez a aucun interrupteur. Ne pas vous servir des telephones se trouvant dans le batiment ou vous vous trouvez.
- Evacuez la piece, le batiment ou la zone.
- Appelez immediatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
- Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.

__ l'installation et l'entretien doivent etre assures par un installateur ou un service d'entretien qualifie ou par le fournisseur de gaz.

ATTENTION: L'ACHETEUR DOIT PLACER L'AVERTISSEMENT SUIVANT DANS UN ENDROIT CLAIR ET VISIBLE:

POUR VOTRE SECURITE

Ne pas entreposer ni utiliser d' essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre appareil.

CISSELL DRYER WARRANTY

The Cissell Manufacturing Company (Cissell) warrants all new equipment (and the original parts thereof) to be free from defects in material or workmanship for a period of two (2) years from the date of sale thereof to an original purchaser for use, except as hereinafter provided. With respect to non-durable parts normally requiring replacement in less than two (2) years due to normal wear and tear, and with respect to all new repair or replacement parts for Cissell equipment for which the two (2) year warranty period has expired, or for all new repair or replacement parts for equipment other than Cissell equipment, the warranty period is limited to ninety (90) days from date of sale. The warranty period on each new replacement part furnished by Cissell in fulfillment of the warranty on new equipment or parts shall be for the unexpired portion of the original warranty period on the part replaced.

With respect to electric motors, coin meters and other accessories furnished with the new equipment, but not manufactured by Cissell, the warranty is limited to that provided by the respective manufacturer.

Cissell's total liability arising out of the manufacture and sale of new equipment and parts, whether under the warranty or caused by Cissell's negligence or otherwise, shall be limited to Cissell repairing or replacing, at its option, any defective equipment or part returned f.o.b. Cissell's factory, transportation prepaid, within the applicable warranty period and found by Cissell to have been defective, and in no event shall Cissell be liable for damages of any kind, whether for any injury to persons or property or for any special or consequential damages. The liability of Cissell does not include furnishing (or paying for) any labor such as that required to service, remove or install; to diagnose troubles; to adjust, remove or replace defective equipment or a part; nor does it include any responsibility for transportation expense which is involved therein.

The warranty of Cissell is contingent upon installation and use of its equipment under normal operating conditions. The warranty is void on equipment or parts; that have been subjected to misuse, accident, or negligent damage; operated under loads, pressures, speeds, electrical connections, plumbing, or conditions other than those specified by Cissell; operated or repaired with other than genuine Cissell replacement parts; damaged by fire, flood, vandalism, or such other causes beyond the control of Cissell; altered or repaired in any way that effects the reliability or detracts from its performance, or; which have had the identification plate, or serial number, altered, defaced, or removed.

No defective equipment or part may be returned to Cissell for repair or replacement without prior written authorization from Cissell. Charges for unauthorized repairs will not be accepted or paid by Cissell.

CISSELL MAKES NO OTHER EXPRESSED OR IMPLIED WARRANTY, STATUTORY OR OTHERWISE, CONCERNING THE EQUIPMENT OR PARTS INCLUDING, WITHOUT LIMITATION, A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR A WARRANTY OF MERCHANTABILITY. THE WARRANTIES GIVEN ABOVE ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. CISSELL NEITHER ASSUMES, NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT, ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE MANUFACTURE, USE OR SALE OF ITS EQUIPMENT OR PARTS.

For warranty service, contact the distributor from whom the Cissell equipment or part was purchased. If the distributor cannot be reached, contact Cissell.

IDENTIFICATION NAMEPLATE

The identification nameplate is located on the rear wall of the dryer. It contains the dryer serial number, product number, model number, electrical specifications and other important data that may be needed when servicing and ordering parts, wiring diagrams, etc. Do not remove this nameplate.

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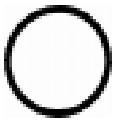
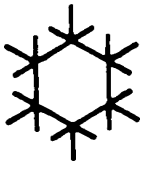
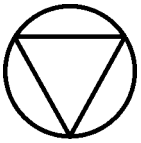
SYMBOLS

The following symbols are used in this manual and/or on the machine.

Symbol	Description
	NOTE!
	Hot! Do Not Touch **Heiß! Nicht Beruhren** **Haute temperature! Ne pas toucher** **Caliente! no tocar**
	dangerous voltage **tension dangereuse** **Gefährliche elektrische Spannung** **tension peligrosa**
	on **marche** **Ein** **conectado**
	**off** **arrêt** **Aus** **desconectado**
	start **demarrage** **Start** **arranque de un movimiento**
	emission of heat in general **êmission de chaleur en general** **Warmeabgabe allgemein** **emisión de calor**
	**cooling** **refroidissement** **Kühlen** **enfriamiento**

SYMBOLS

Symbol	Description
	rotation in two directions **rotation dans les deux sens** **Drehbewigung in zwei Richtungen** **movimiento rotativo en los dos sentidos**
	direction of rotation **sens de mouvement continu de rotation** **Drehbewegung in Pfeilrichtung** **movimiento giratorio o rotatorio en el sentido de la flecha**
	**End of Cycle**
	caution **attention** **Achtung** **atencion; precaucion**

UNPACKING

Upon arrival of the equipment, any damage in shipment should be reported to the carrier immediately.

Upon locating permanent location of a unit, care should be taken in movement and placement of equipment.

See outline clearance diagrams for correct dimensions.

Remove all packing material such as: tape, manuals, skid, etc

Leveling: Use spirit level on top of dryer. Adjust leveling bolts on dryer (see adjustable leveling bolts in maintenance section).

Check voltage and amperes on rating plate before installing the dryer.

GENERAL INSTALLATION (ALL DRYERS)

The construction of the dryers permits installation side-by-side to save space or to provide a wall arrangement. Position dryer for the least amount of exhaust piping and elbows, and allow free access to the rear of dryer for future servicing of belts, pulleys and motors. Installation clearance from all combustable material is 0" ceiling clearance, 0" rear clearance, and 0" side clearance.

Before operating dryer, open basket door and remove blocking between front panel and basket. Read the instruction tags, owner's manual, warnings, etc.

IMPORTANT
Opening the clothes loading door deactivates the door switch to shut off the motors, fan, gas, steam, or electric element. To restart the dryer, close the door and press in the push to start button and hold briefly.

IMPORTANT
This dryer is designed for a capacity maximum load. Overloading it will result in long drying times and damp spots on some clothes.

IMPORTANT
Maximum operating efficiency is dependent upon proper air circulation. The lint screen must be kept cleaned daily to insure proper air circulation throughout the dryer.

IMPORTANT
Provide adequate clearance for air opening into the combustion chamber.

GENERAL INFORMATION

The dryer is so designed that when an operator opens the dryer door, the basket and exhaust fan stop. You can expect fast drying from a laundry dryer. Hot, dry air is properly and effectively moved through the basket and exhausted through a lint trap to the atmosphere. The dryer comes equipped with an inclined self-cleaning lint screen. In this system, lint accumulates on the underside of the screen until a blanket of lint will fall from the screen to the bottom of the dryer cabinet, and should be removed daily or as required, to prevent an over-accumulation.

IMPORTANT
Provide adequate clearance for air openings into the combustion chamber.

DRYER "COOL-DOWN" CYCLE

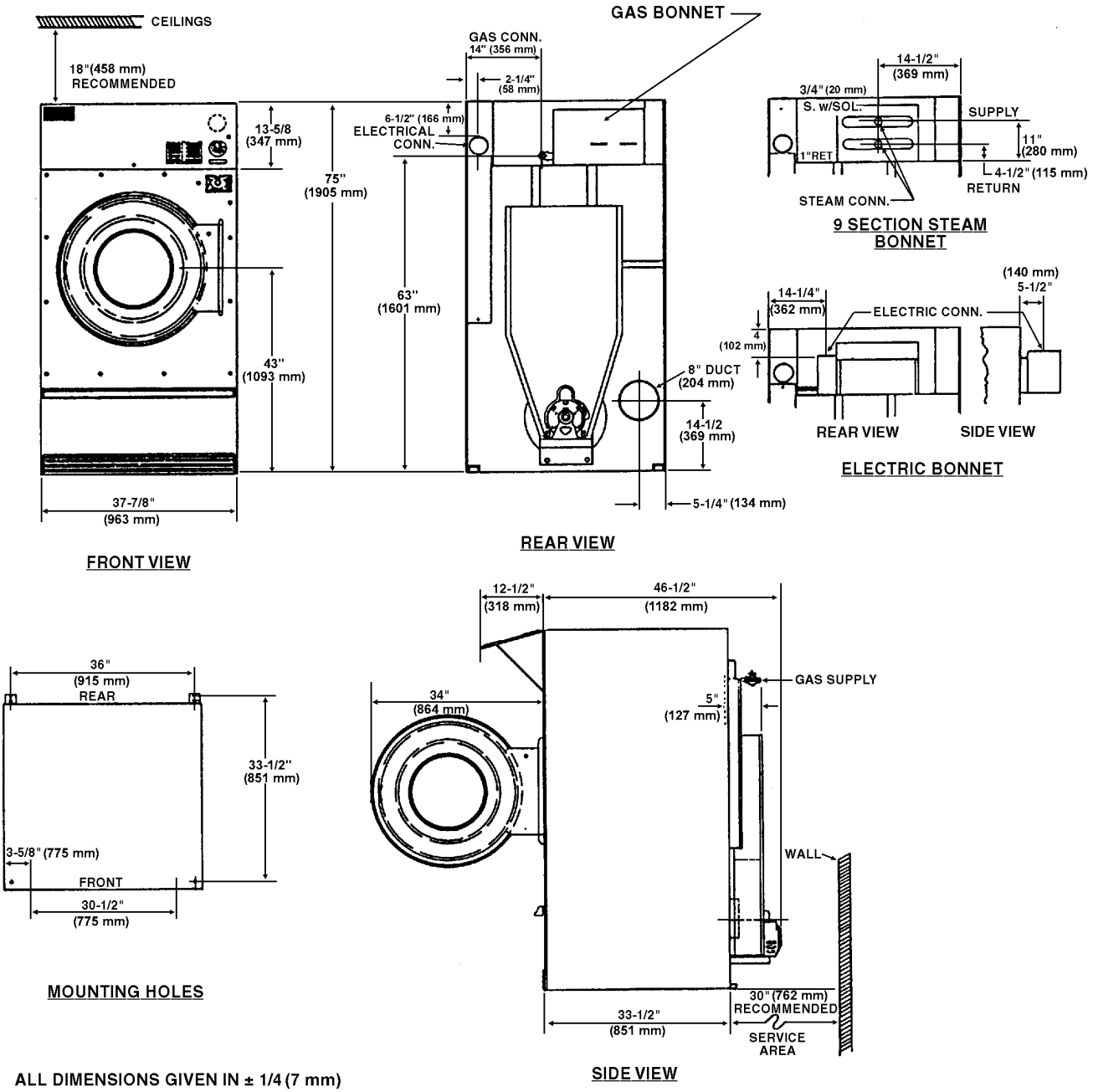
Permanent press, durable press and other modern day fabrics require the care that your laundry dryers now provide. At the end of the drying cycle, a timed "Cool-Down" control automatically takes over and continues the rotation of the fan and basket without heat until the garment load reaches a safe cool temperature. This function is performed at the end of each drying cycle and continues for two minutes.

REPLACEMENT PARTS

Replacement parts for this dryer are available from your distributor or by contracting the factory at the address or phone number printed on the cover page of this manual.

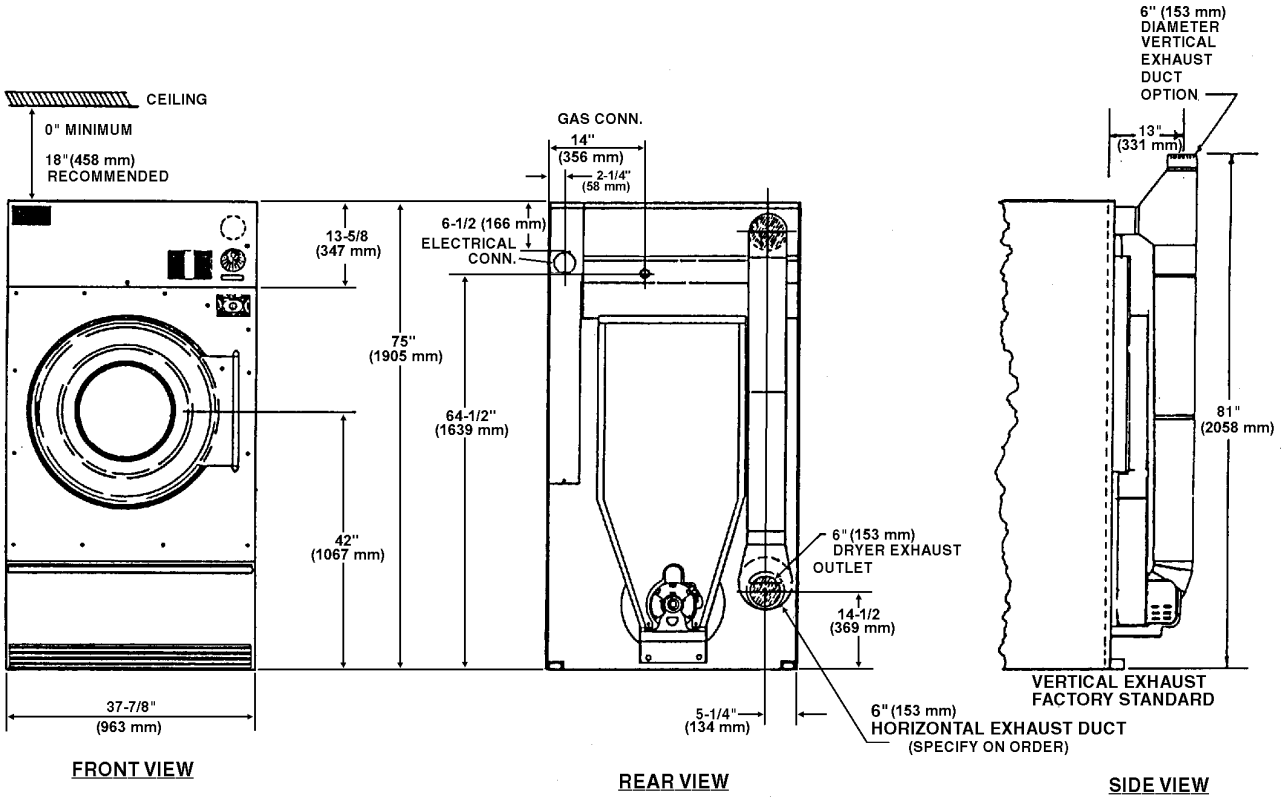
ONLY CISSELL PARTS SHOULD BE USED.

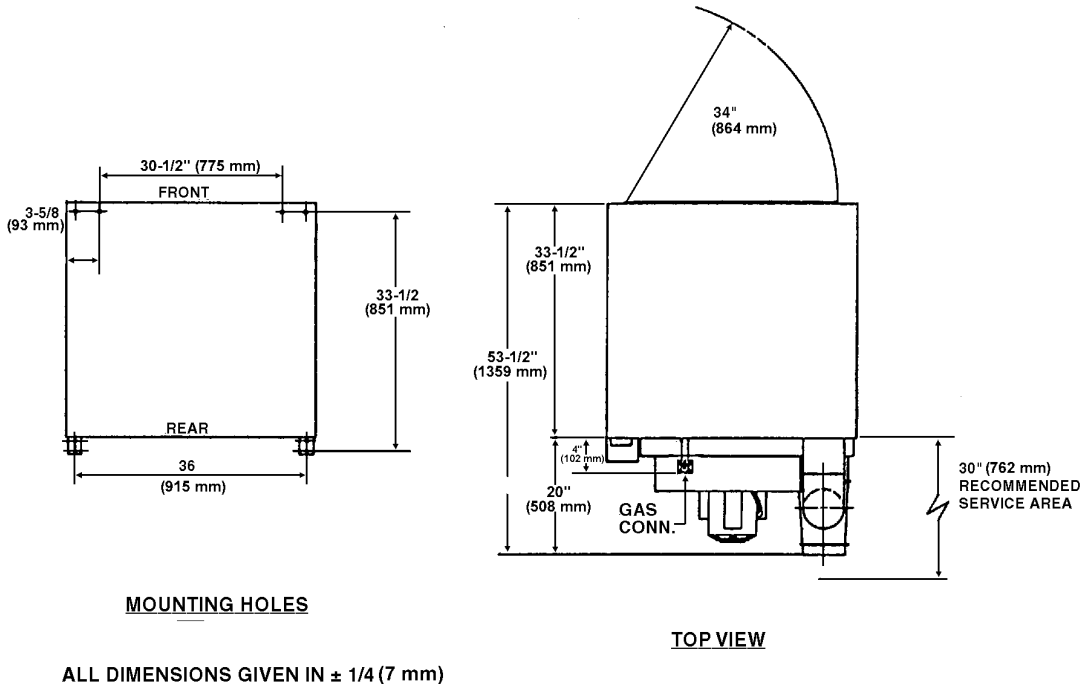
50 lb. Dryer Dimensions - Standard Gas, Steam and Electric Heated
(Illustration)



ALL DIMENSIONS GIVEN IN ± 1/4 (7 mm)

50 lb. Dryer Dimensions - Gas Energy-Saver Model
(Illustration)





ALL DIMENSIONS GIVEN IN ± 1/4 (7 mm)

GENERAL SPECIFICATIONS FOR 50 LB. LAUNDRY DRYERS (STANDARD GAS, STEAM, AND ELECTRIC HEATED MODELS)

Basket Load Capacity ..... 50 lb (23 kg)

Floor Space (Single or Double Motor) ..... 75" (1905 mm) High
37-7/8" (962 mm) Wide
47-1/2" (1206 mm) Deep

Basket Size ..... 36" (914 mm) Diameter
30-1/4" (768 mm) Deep

Exhaust Duct ..... 8" (203 mm) Diameter

Motor Size ..... See chart on page 16

Maximum Air Displacement ..... 800 cfm (1359 m^3/h.)

Recommended Operating Range ..... 630-730 cfm (1070 - 1240 m^3/h)

Basket Speed ..... Reversing - 42 rpm- 3.2 reversals per minute
Non-reversing - 42 rpm

Export Cube ..... 90.2 ft^3 (2.6 m^3)

For total amps, check electrical rating plate on dryer.

1. Can be designed for any voltage
2. 50 Hz. or 60 Hz.
3. 1 or 3 Phase

Electrical wiring to dryer must comply with local electrical code requirements.

GENERAL SPECIFICATIONS FOR GAS FIRED LAUNDRY DRYERS

Gas Supply	1/2" (DN15) Pipe connection
Heat Input* (4 Burners)	130,000 Btu/h (32,759 kcal/h) Natural gas 130,000 Btu/h (32,759 kcal/h) Liquid petroleum gases
Drying Time (Approx.)	10 lb (4.5 kg) Dry weight (Indian Head) 100% moisture retention - 10 min.
Net Weight (Approx.)	545 lb (247 kg) Model with single motor 599 lb (272 kg) Model with double motor
Domestic Shipping Weight (1 Carton)	580 lb (263 kg) Model with single motor 634 lb (288 kg) Model with double motor
Export Shipping Weight (1 Carton)	586 lb (266 kg) Model with single motor 671 lb (304 kg) Model with double motor
Export Shipping Dimensions	83" (2108 mm) Long 45" (1143 mm) Wide 55" (1397 mm) High

* Input ratings as shown are for elevations up to 2,000 ft. (610 m). For higher elevations, ratings should be reduced 4% for each 1,000 ft. (305 m) above sea level.

ELECTRIC HEATED LAUNDRY DRYERS

Heater Input	30 kW/h (25,812 kcal/h)
Drying Time (Approx.)	12 lb (5.4 kg) Dry weight (Indian Head) 80% moisture retention - 12 min.
Net Weight (Approx.)	565 lb (256 kg) Model with single motor 625 lb (283 kg) Model with double motor
Domestic Shipping Weigh (1 Carton)	600 lb (272 kg) Model with single motor 650 lb (295 kg) Model with double motor
Export Shipping Weight (1 Carton)	624 lb (283 kg) Model with single motor 660 lb (299 kg) Model with double motor
Export Shipping Dimensions	83" (2108 mm) Long 45" (1143 mm) Wide 55" (1397 mm) High

GAS ENERGY-SAVER DRYER SPECIFICATIONS

Basket Capacity	50 lb (23 kg) Dry weight
Floor Space	75" (1905 mm) High 53-1/2" (1359 mm) Deep 37-7/8" (962 mm) Wide
Basket Size	36" (914 mm) Diameter 30" (762 mm) Deep
Exhaust Duct*	6" (152 mm) Diameter
Exhaust Air Pressure	Max. 0.3" (0.75 mbar) Static pressure
Motor Size	See chart on page 16
Basket Speed	Reversing - 42 rpm - 3.2 reversals per minute Non-reversing - 42 rpm
Maximum Air Displacement	450 cfm (764 m^3/h)
Heat Input	104,000 Btu/h ** 26,208 kcal/h
Gas Supply	1/2" (DN15) Pipe connection
Drying Time (Approx.)	10 lb (4.5 kg) Dry weight (Indian Head) 100% moisture retention - 10 min.
Net Weight (Approx.)	640 lb (290 kg) Model with single motor 690 lb (313 kg) Model with double motor
Domestic Shipping Weight (Approx.)	705 lb (320 kg) Model with single motor 755 lb (342 kg) Model with double motor
Export Shipping Weight (Approx.)	1180 lb (535 kg) Model with single motor 1230 lb (558 kg) Model with double motor

* For high altitude installation, remove the 5" (127mm) I.D. exhaust ring.

** Input ratings as shown are for elevations up to 2,000 ft. (610 m). For higher elevations, ratings should be reduced 4% for each 1,000 ft. (305 m) above sea level

Gas burners are set at the factory at 3.5" W.C. (8.7 mbar) regulated pressure (Natural gas only).

Models can be equipped for use with natural gas or liquid petroleum gases (L.P.)

Electrical wiring to dryer must conform to local electrical code requirements.

GENERAL SPECIFICATIONS FOR STEAM HEATED LAUNDRY DRYERS

Maximum Air Displacement	800 cfm (1359 m³/h)
Recommended Operating Range	630-730 cfm (1070 - 1240 m³/h)
Steam Supply Connection	3/4" (DN20)
Steam Return Connection	3/4" (DN20)
Operating Steam Pressure	Low pressure - 7-15 psi (0.5 - 1 Bar) Maximum high pressure- 100 psi (6.9 Bar)
Drying Time (Approx.)	25 lb (11 kg) Dry weight (Indian Head) 80% moisture retention - 30 minutes low pressure, 22 minutes high pressure
Steam Consumption	Low pressure - 2.9 BHP 24,496 kcal/h High pressure - 3.8 BHP 32,098 kcal/h
Net Weight (Approx.)	595 lb (270 kg) Single motor 655 lb (297 kg) Double motor
Export Shipping Weight (1 Carton)	630 lb (286 kg) Single motor 690 lb (313 kg) Double motor
Export Shipping Weight (1 Box)	638 lb (289 kg) Single motor 698 lb (317 kg) Double motor
Export Shipping Dimensions	83" (2108 mm) Long 45" (1143 mm) Wide 55" (1397 mm) High

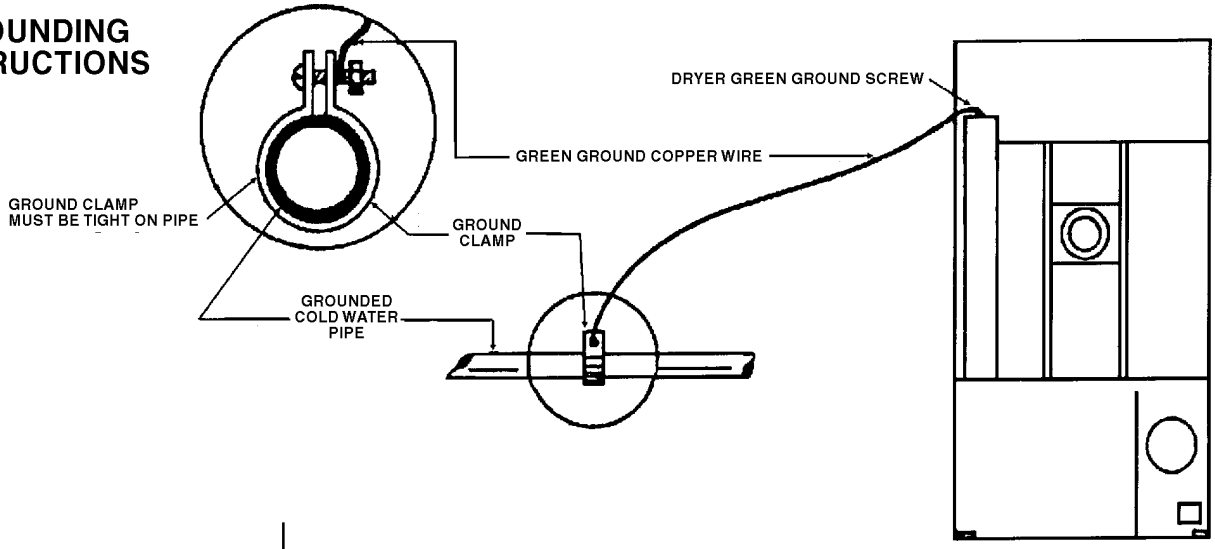
MOTOR NUMBER LIST FOR 50 LB. DOUBLE MOTOR MODELS

Motor No.	Voltage	Hz.	Phase	HP	KWATTS	Amps	Basket/Fan
MTR300	115/200-240	60	1	1/2	.373	6.2/3.1	B
MTR302	200-240/480	60	3	1/2	.373	1.8/.9	B
MTR300	110/200-230	50	1	1/2	.373	7.4/3.7	B
MTR302	240/415	50	3	1/2	.373	2.0/1.0	B
MTR101	575	60	3	1	.75	1.7	B
MTR302	220/380	50	3	1/2	.373	2.0/1.0	B
MTR302	220/380	60	3	1/2	.373	1.8/.9	B
MTR302	220/346	50	3	1/2	.373	2.0/1.0	B
MTR302	220/380	60	3	1/2	.373	1.8/.9	F
MTR302	200/346	50	3	1/2	.373	2.0/1.0	F
MTR300	115/200-240	60	1	1/2	.373	6.2/3.1	F
MTR300	110/200-230	50	1	1/2	.373	7.4/3.7	F
MTR184	240/415	50	3	1/3	.25	1.6/.9	F
MTR302	200-240/480	60	3	1/2	.373	1.8/.9	F
MTR101	575	60	3	1	.75	1.7	F
MTR302	220/380	50	3	1/2	.373	2.0/1.0	F

MOTOR NUMBER LIST FOR 50 LB. SINGLE MOTOR MODELS

Motor No.	Voltage	Hz.	Phase	HP	KWATTS	Amps	Basket/Fan
MTR301	115/200-240	60	1	1	.75	9.0/4.9-4.5	B/F
MTR301	110/200-230	50	1	1	.75	10.0/5.0	B/F
MTR211	200-240/480	60	3	3/4	.56	3.2/1.6	B/F
MTR303	240/415	50	3	1	.75	3.6/1.8	B/F
MTR303	220/380	50	3	1	.75	3.6/1.8	B/F
MTR303	220/380	60	3	1	.75	3.2/1.6	B/F
MTR303	200/346	50	3	1	.75	3.6/1.8	B/F

GROUNDING INSTRUCTIONS


DRYER GREEN GROUND SCREW
GREEN GROUND COPPER WIRE
GROUND CLAMP MUST BE TIGHT ON PIPE
GROUND CLAMP
GROUNDED COLD WATER PIPE

ELECTRICAL CONNECTIONS

Dryers must be electrically grounded by a separate #14 or larger green wire from the grounding terminal within the service connection box, to a cold water pipe. In all cases, the grounding method must comply with local electrical code requirements; or in the absence of local codes, with the ***National Electrical Code, ANSI/NFPA 70 or the Canadian Electrical Code, CA C22.1.***

See wiring diagram furnished with dryer. Your dryer is completely wired at the factory and it is only necessary for the electrician to connect the power leads to the wire connectors within the service connection box on the rear of the dryer. Do not change wiring without consulting the factory, as you may void the factory warranty. DO NOT CONNECT THE DRYER TO ANY VOLTAGE OR CURRENT OTHER THAN THAT SPECIFIED ON THE DRYER RATING PLATE. (Wiring diagram is located on rear wall of dryer.)

All panels must be in position before operation of dryer.

ELECTRICAL CONTROLS SERVICE

Caution: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.

Verify proper operation after servicing.

«Attention. Lors des opérations d'entretien des commandes, ètiqueter tous les fils avant de les dèconnecter. Toute erreur de câblage peut être une source de danger et de panne»

GAS PIPING INSTALLATION

1. The installation must conform with local codes, or in the absence of local codes with the ***National Fuel Gas Code, ANSI Z223.1 or the CAN/CGA-B149, Installation Codes.***

2. Check identification nameplate for type of gas for dryer.

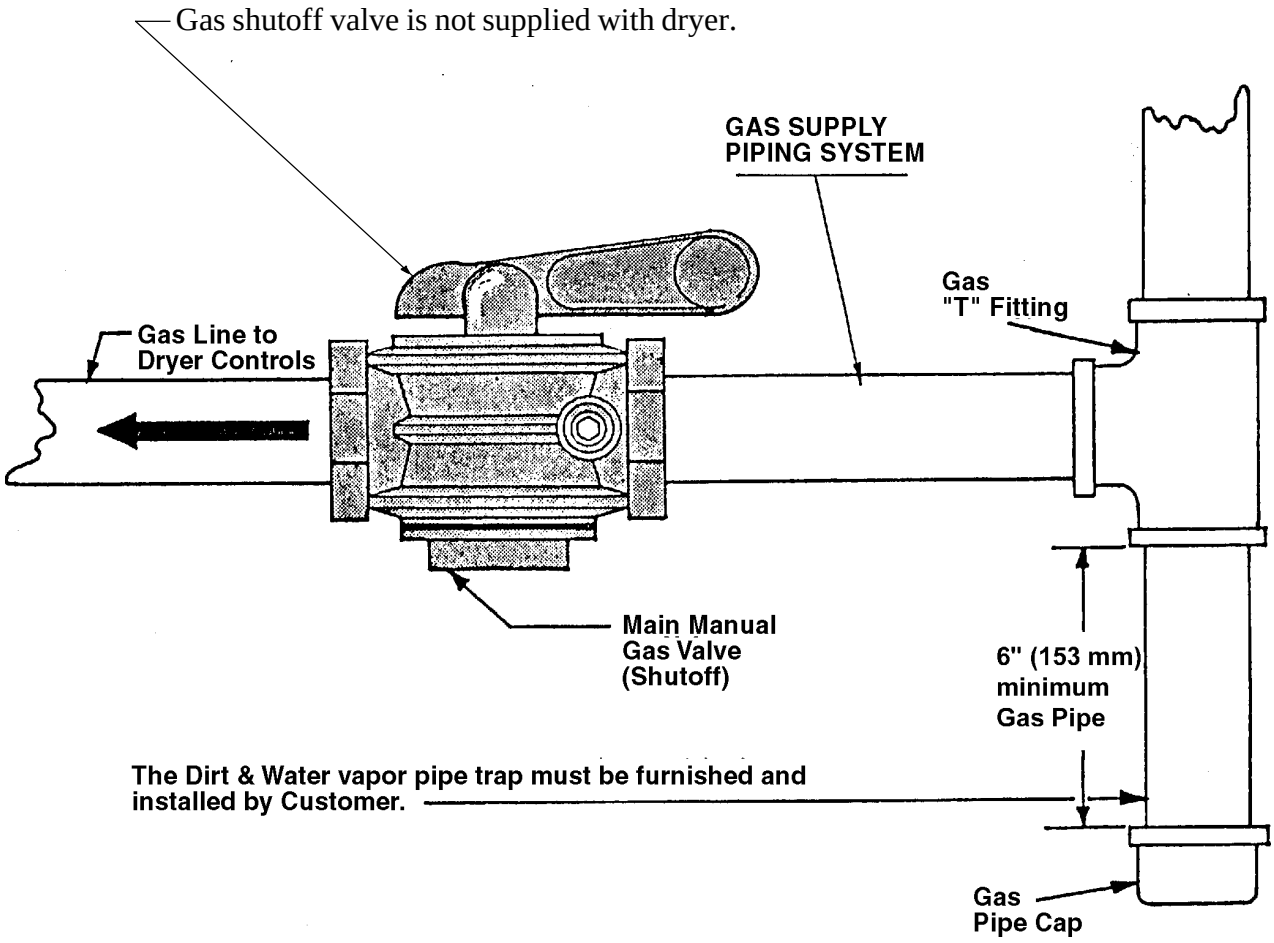
3. Check the altitude of dryer.

4. Check with utilities company for proper gas pressure and gas supply line.

5. Natural gas only—check the gas pressure inlet supply to dryer, 11 inches water column maximum. Manifold pressure—3.5 inches water column (8.8 mbar) pressure.

6. L.P. gas only—check the gas pressure inlet supply to dryer, 13 inches water column(32.4 mbar) maximum. Manifold pressure—11 inches water column (27.4 mbar) pressure.

CAUTION: Low gas pressure and intermittent gas will cause gas ignition problems and inadequate drying of laundry.



The dryer and it's individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5 kPa).

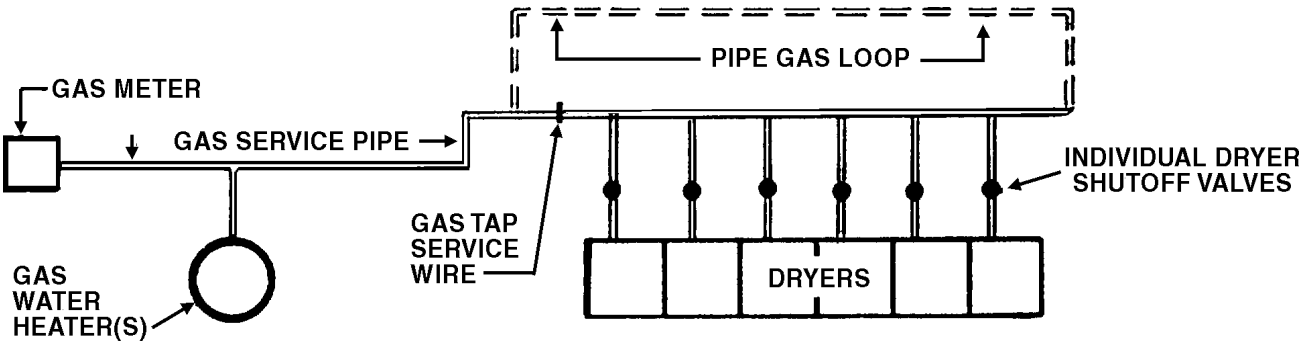
The dryer must be isolated from the gas supply piping system by closing it's individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).

GAS SERVICE INSTALLATION INSTRUCTIONS

The size of the gas service pipe is dependant upon many variables, such as tees, lengths, etc. Specific pipe size should be obtained from the gas supplier. Refer to the "Gas Pipe Size" chart in this manual for general gas pipe size information.

CAUTION: Gas loop piping must be installed as illustrated to maintain equal gas pressure for all dryers connected to a single gas service

Other gas-using appliances should be connected upstream from the loop.



WARNING:
LIQUIFIED PETROLEUM GASES ONLY !

GAS PRESSURE REGULATOR FOR LIQUIFIED PETROLEUM GASES

A gas pressure regulator for liquified petroleum gases is not furnished on gas heated clothes dryers. This regulator is normally furnished by the installer. In accordance with American Gas Association (AGA) standards, a gas pressure regulator, when installed indoors, must be equipped with a vent limiter or a vent line must be installed from the gas pressure regulator vent to the outdoors.

Gas Pipe Size Chart

TOTAL BTU/HR (for LP Gas correct total BTU/HR below by multiplying by .6)	TOTAL KCAL	GAS PIPE SIZE FOR 1000 BTU (250 KCAL) NATURAL GAS AT 7" (17.8 CM) W.C. PRESSURE In figuring total length of pipe, make allowance for tees and elbows.					
	HOUR	(25 ft.) 7,62 m	(50 ft.) 15,24 m	(75 ft.) 22,86 m	(100 ft.) 30,48 m	(125 ft.) 38,1 m	(150 ft.) 45,72 m
60,000	15000	3/4	3/4	3/4	3/4	3/4	3/4
80,000	20000	3/4	3/4	3/4	1	1	1
100,000	25200	3/4	3/4	1	1	1	1
120,000	30200	3/4	1	1	1	1	1
140,000	35200	3/4	1	1	1	1	1 1/4
160,000	40300	3/4	1	1	1 1/4	1 1/4	1 1/4
180,000	45300	1	1	1	1 1/4	1 1/4	1 1/4
200,000	50400	1	1	1 1/4	1 1/4	1 1/4	1 1/2
300,000	75600	1	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2
400,000	100800	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	2
500,000	126000	1 1/4	1 1/2	1 1/2	2	2	2
600,000	151200	1 1/2	1 1/2	2	2	2	2
700,000	176400	1 1/2	2	2	2	2	2 1/2
800,000	202000	1 1/2	2	2	2	2 1/2	2 1/2
900,000	230000	2	2	2	2 1/2	2 1/2	2 1/2
1,000,000	250000	2	2	2	2 1/2	2 1/2	2 1/2
1,100,000	270000	2	2	2 1/2	2 1/2	2 1/2	2 1/2
1,200,000	300000	2	2	2 1/2	2 1/2	2 1/2	2 1/2
1,300,000	330000	2	2 1/2	2 1/2	2 1/2	2 1/2	3
1,400,000	350000	2	2 1/2	2 1/2	2 1/2	3	3
1,500,000	380000	2	2 1/2	2 1/2	2 1/2	3	3
1,600,000	400000	2	2 1/2	2 1/2	3	3	3
1,700,000	430000	2	2 1/2	2 1/2	3	3	3
1,800,000	450000	2 1/2	2 1/2	3	3	3	3
1,900,000	480000	2 1/2	2 1/2	3	3	3	3
2,000,000	504000	2 1/2	2 1/2	3	3	3	3 1/2
2,200,000	550000	2 1/2	3	3	3	3 1/2	3 1/2
2,400,000	605000	2 1/2	3	3	3	3 1/2	3 1/2
2,600,000	650000	2 1/2	3	3	3 1/2	3 1/2	3 1/2
2,800,000	705000	2 1/2	3	3	3 1/2	3 1/2	3 1/2
3,000,000	750000	2 1/2	3	3 1/2	3 1/2	3 1/2	4
3,200,000	806000	3	3	3 1/2	3 1/2	3 1/2	4
3,400,000	850000	3	3 1/2	3 1/2	3 1/2	4	4
3,600,000	907000	3	3 1/2	3 1/2	3 1/2	4	4
3,800,000	960000	3	3 1/2	3 1/2	4	4	4
4,000,000	1000000	3	3 1/2	3 1/2	4	4	4

STEAM PIPING-INSTALLATION INSTRUCTIONS

1. Set and anchor dryer in position. Machine should be level to assure proper steam circulation.

2. To prevent condensate draining from headers to dryer, piping should have a minimum 12" (305 mm) above respective header. Do not make steam connection to header with a horizontal or downwardly facing tee or elbow.

3. Whenever possible, horizontal runs of steam lines must drain, by gravity, to respective steam header. Water pockets, or an improperly drained steam header will provide wet steam, causing improper operation of dryer. If pockets or improper drainage cannot be eliminated, install a bypass trap to drain condensate from the low point in the steam supply header to the return.

4. In both steam supply and steam return line, it is recommended that each have a 3/4" 20 mm) union and 3/4" (20 mm) globe valve. This will enable you to disconnect the steam connections and service the dryer while your plant is in operation.

5. Before connecting trap and check valve to dryer, open globe valve in steam supply line and allow steam to flow through dryer to flush out any dirt and scale from dryer. This will assure proper operation of trap when connected.

6. After flushing system, install bucket trap (with built-in strainer) and check valve. For successful operation of dryer, install trap 18" (457 mm) below coil and as near to the dryer as possible. Inspect trap carefully for inlet and outlet markings and install according to trap manufacturer's instructions. If steam is gravity returned to boiler, omit trap but install check valve in return line near dryer.

7. Install union and globe valve in return line and make final pipe connections to return header.

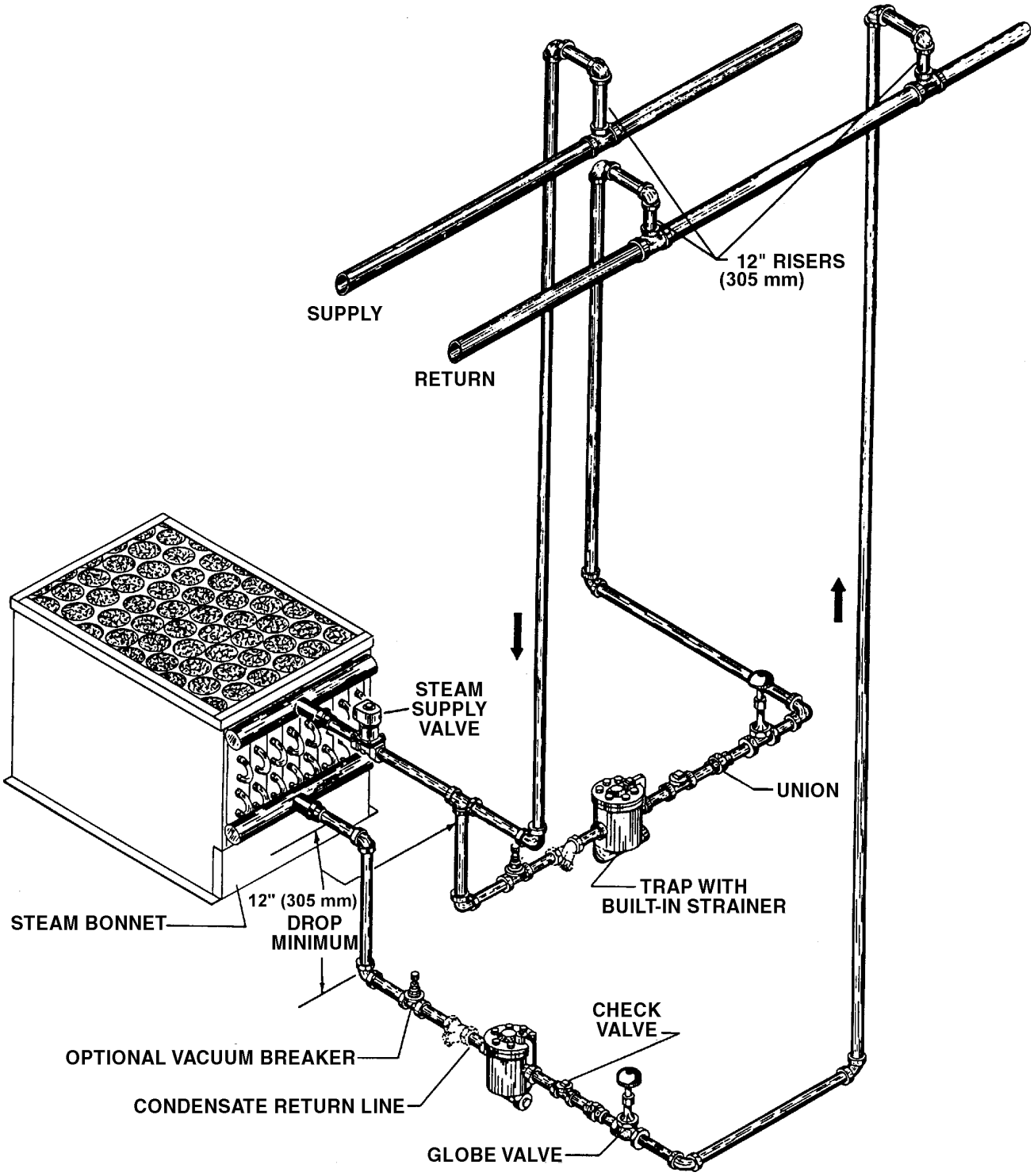
PIPING RECOMMENDATIONS

1. Trap each dryer individually. Always keep the trap clean and in good working condition.

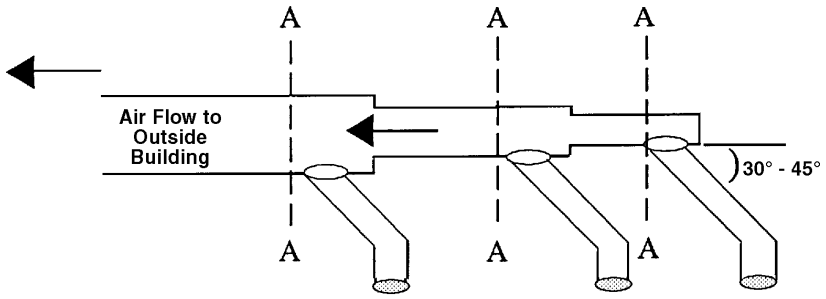
2. When dryer is on the end of a line of equipment, extend header at least 4 feet beyond dryer. Install globe valve, union, check valve and bypass trap at end of line. If gravity returned to boiler, omit trap.

3. Insulate steam supply and return line for safety of operator and safety while servicing dryer.

4. Keep dryer in good working condition. Repair or replace any worn or defective parts.


12" RISERS
(305 mm)
SUPPLY
RETURN
STEAM
SUPPLY
VALVE
UNION
TRAP WITH
BUILT-IN STRAINER
STEAM BONNET
12" (305 mm)
DROP
MINIMUM
CHECK
VALVE
OPTIONAL VACUUM BREAKER
CONDENSATE RETURN LINE
GLOBE VALVE

For Exhaust Duct less than 14 feet (5 m) and 2 elbows equivalent and less than 0.3 inches (8 mm) static pressure.



DRYER EXHAUSTS

Area of section "A-A" must be equal to the sum of dryer exhaust pipes entering multiple exhaust pipe. (*See chart below.*)

MODELS: L28FD30, L28US30, L36FD30, L36US30, L36US36, L44FD42

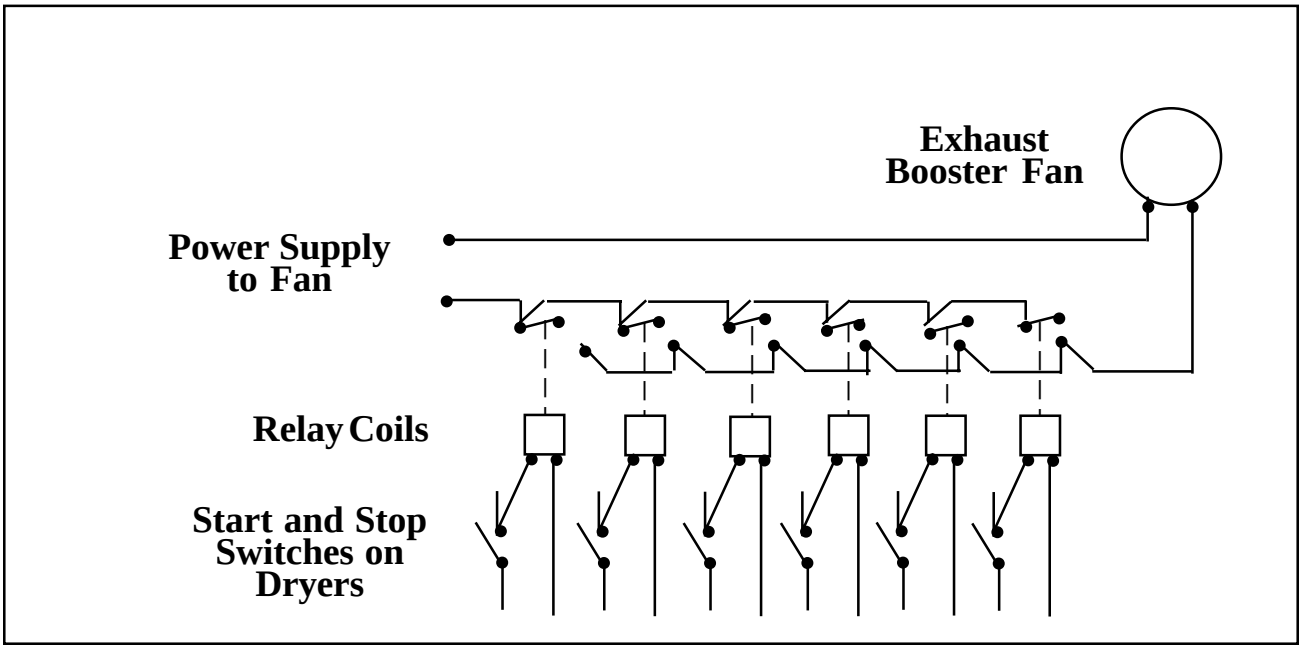
No. of dryers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Duct diameter (in inches)	6	9	11	12	14	15	16	17	18	19	20	21	22	23	23	24	25	26	26	27	28	28	29	30
(in cm)	15	23	27	30	35	38	41	43	46	48	51	53	56	58	58	61	63	66	66	68	71	71	73	76

MODELS: L28CD30, L28UR30, L36CD30, L36UR30, L36UR36, L36AR36, L44FD42

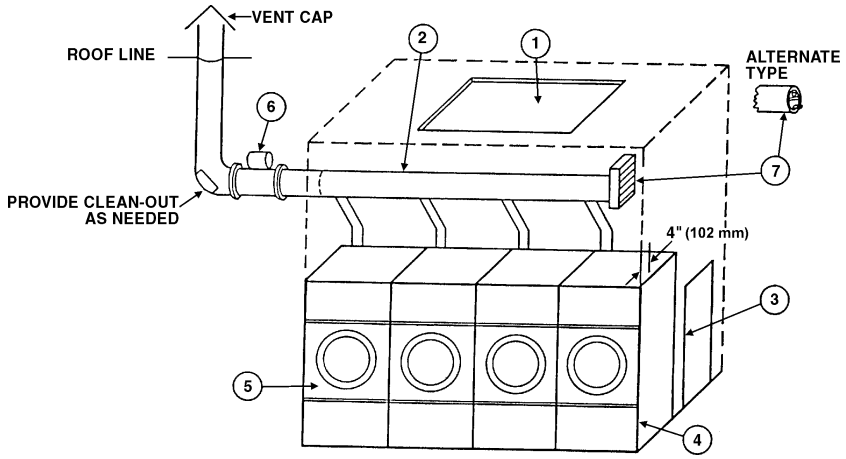
No. of dryers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Duct diameter (in inches)	8	12	14	16	18	20	22	23	24	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
(in cm)	20	30	25	41	46	51	56	58	61	66	68	71	73	76	78	81	84	86	89	91	94	97	99	100

MODELS: L44CD42, L50CD42

No. of dryers	1	2	3	4	5	6	7	8	9	10	11	12
Duct diameter (in inches)	12	17	21	24	27	30	32	34	36	38	40	42
(in cm)	30	43	53	61	68	76	81	86	91	97	100	106



Dryer Installation with Multiple Exhaust



DRYER INSTALLATION WITH MULTIPLE EXHAUST

For Exhaust Duct more than 14 feet (5 m) and 2 elbows equivalent and more than 0.3 inches (8 mm) static pressure.
(See illustration on next page.)

1. Make-up air from outside building may enter enclosure from top or side walls. ***(See Dryer Make-Up Air Requirements Chart)***
2. Use constant diameter duct with area equal to the sum of dryer duct areas.
   EXAMPLE: 6-8 inch (203 mm) diameter duct = 1-19.6 inches (498 mm) diameter duct in area. Use 20 inches (508 mm) diameter duct or diameter to match tube-axial fan.
3. Enclosure (plenum) with service door. This separates the dryer air from room comfort air. If dryers use room air instead of outside air, the heat loss can be another 25 Btu/h (6.3 kcal/h) for each cubic foot per minute (cfm) used.
4. Zero inches clearance to combustible material allowed on sides and at points within 4 inches (100 mm) of front on top.
5. Heat loss into laundry room from dryer fronts *only* is about 60 Btu/h per square foot (15 kcal/h per 0.1m²).
6. Flange mounted, belt driven tube-axial fan. Fan must run when one or more dryers are running. *See suggested Automatic Electrical Control Wiring Diagram on previous page.* Must meet local electrical codes. Fan air flow (cfm) (m³/min.) is equal to sum of dryer air flows, but static pressure (SP) is dependent on length of pipe and number of elbows.
7. Barometric bypass damper—Adjust to *closed flutter position* with all dryers and exhaust fan running. Must be located within enclosure

CAUTION: *Never* install hot water heaters or other gas appliances in the same room as dryers. *Never* install cooling exhaust fans in the same room as dryers.

CAUTION: *Never* exhaust dryers with other types of equipment.

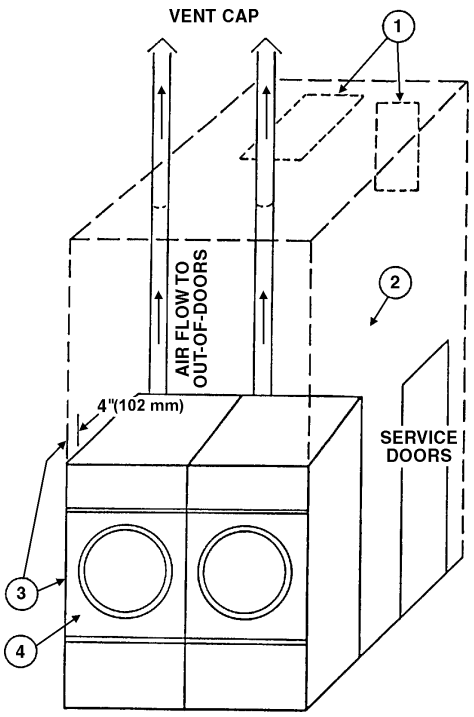
Suggested Minimum Dryer Make-up Air Requirements

Dryer Model	Dryer Pocket Capacity		Maximum Air Flow Rate per Pocket		Duct Size For Service Connection		Required Make-up Air Area per Pocket	
	lb	kg	cfm	m3/h	inch	mm	sq. inch	cm2
C 30	30	13.6	700	1190	8	203	135	871
C 30 E/S	30	13.6	400	680	6	153	77	497
C 30 ST	30	13.6	450	765	6	153	87	561
C 50	50	22.7	800	1360	8	203	154	994
C 50 E/S	50	22.7	450	765	6	153	87	561
C 75	75	34	1000	1700	8	203	192	1239
C 75 E/S	75	34	536	911	6	153	103	665
C 75 ST	75	34	1000	1700	12	305	192	1239
HD80	80	36.3	1465	2490	10	254	282	1819
C 110	110	50	2200	3740	12	305	422	2723
C 110 E/S	110	50	850	1445	8	203	163	1052
C 125	125	56.7	2000	3400	12	305	384	2477
C 150	150	68	2250	3825	12	305	432	2787
HD175	175	79.4	2780	4726	12	305	534	3445
HD190	190	86.2	3000	5100	12	305	576	3716
HD20	20	9.1	450	765	6	153	87	561
HD30	30	13.6	625	1063	8	203	120	774
HD50	50	22.7	700	1190	8	203	135	871
HD75	75	34	750	1275	8	203	144	929

Notes:

1) The Model C 30 ST has 2 pockets per dryer, each pocket has the above listed characteristics; each pocket is exhausted separately with a 6" (152 mm) duct.
2) The Model C 75 ST has 2 pockets per dryer, each pocket has the above listed characteristics; both pockets have one 8" (203 mm) exhaust manifolded into one 12" (305 mm) exhaust duct for connection.
3) For the C 30 ST and the C 75 ST Models, the Required Make-up Air Area shown in the table should be doubled since it is shown per pocket, only.
4) E/S indicates an Energy Saving Model.

Dryer Installation With Separate Exhaust (Preferred)



DRYER INSTALLATION WITH SEPARATE EXHAUST (PREFERRED)

For ductwork less than 14 feet (5 m) and 2 elbows equivalent and less than 0.3 inches (8 mm) static pressure:

NEVER exhaust the dryer into a chimney.

NEVER install wire mesh screen over the exhaust or make-up air area.

NEVER exhaust into a wall, ceiling, or concealed space.

1. Make-up air opening from outside the building may enter the enclosure from the top or side walls. ***(See Dryer Make-Up Air Requirements Chart)***
2. Enclosure (plenum) with service door. This separates the dryer air from the room comfort air. If dryers use room air instead of outside air, additional heat loss can be another 25 Btu/h (6.3 kcal/h) for each cubic foot per minute (cfm) (.03m³/min.) used.
3. Zero inches (mm) clearance to combustible material allowed on sides and at points within 4 inches (100 mm) of front on top.
4. Heat loss into laundry room from dryer front panels is about 60 Btu/h per square foot (15 kcal/h per 0.1m²).

DRYER AIR FLOW INSTALLATION

Nothing is more important than air flow for the proper operation of a clothes dryer. A dryer is a pump which draws make-up air from the out-of-doors, through the heater, through the clothes and then forces the air through the exhaust duct back to the out-of-doors. Just as in a fluid water pump, there must be a fluid air flow to the inlet of the dryer, if there is to be the proper fluid air flow out of the exhaust duct.

In summary, there must be the proper size out-of-doors inlet air opening (4-6 times the combined areas of the air outlet) and an exhaust duct, size and length of which allows flow through the dryer with no more than 0.3" w.c. (.8 mbar) pressure in the exhaust duct.

In some instances, special fans are required to supply make-up air, and/or boost exhaust fans are required for both regular and energy saving models.

EXHAUST DUCT

FOR BEST DRYING:

1. Exhaust duct maximum length 14 feet (5 m) of straight duct and maximum of two 90° bends.
2. Use 45° and 30° elbows wherever possible.
3. Exhaust each dryer separately.
4. Use 2 feet (0.6 m) of straight duct on dryer before installing an elbow on energy-saver models only.
5. **Do not** install wire mesh or other restrictions in the exhaust duct.
6. Use clean-outs in the exhaust duct and clean periodically when needed.
7. **Never** exceed 0.3" water column (.8 mbar) static pressure in the exhaust duct.
8. Inside surface of the duct must be smooth.
9. Recommend pop rivets for duct assembly.

MAKE-UP AIR

FOR BEST DRYING:

1. Provide opening to the out-of-doors in accordance with the following:
   For each dryer—
   6 inches (152 mm) diameter exhaust requires a 1 square feet (0.1 m^2) opening for make-up air.
   8 inches (203 mm) diameter exhaust requires a 2 square feet (0.2 m^2) opening for make-up air.
   12 inches (305 mm) diameter exhaust requires a 4 square feet (0.4 m^2) opening for make-up air.
2. Use barometric shutters in the inlet air opening to control air when dryers are not running.

OTHER RECOMMENDATIONS

Other Recommendations

To assure compliance, consult local building code requirements.

TROUBLESHOOTING

Troubleshooting

Hot dryer surfaces, scorched clothes, slow drying, lint accumulations, or air switch malfunction are indicators of exhaust duct and/or make-up air problems.

RULES FOR SAFE OPERATION OF DRYER

1. Be sure your dryer is installed properly in accordance with the recommended instructions.
2. **CAUTION**
   Be safe—shut main electrical power supply and gas supply off externally before attempting service.
3. **CAUTION**
   Never use drycleaning solvents: gasoline, kerosene, or other flammable liquids in the dryer. ***Fire and explosion will occur.***
   Never put fabrics treated with these liquids into the dryer.
   Never use these liquids near the dryer.
   Always keep the lint screen clean.
   Never use heat to dry items that contain plastic, foam or sponge rubber, or rags coated with oils, waxes or paints. The heat may damage the material or create a fire hazard. Rubber easily oxidizes, causing excessive heat and possible fire.
   Never dry the above items in the dryer.
4. **Never l**et children play near or operate the dryer. Serious injury will occur if a child should crawl inside and the dryer is turned on.
5. **Never** use dryer door opening and top as a step stool.
6. Read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed any warnings or precautions.
7. **Never** tumble fiberglass materials in the dryer unless the labels say they are machine dryable. Glass fibers break and can remain in the dryer and could cause skin irritation if they become mixed into other fabrics.
8. Reference: Lighting and shut-down instructions and wiring diagrams are located on the rear wall of the dryer cabinet.
9. The dryer must not be installed or stored in an area where it will be exposed to water and/or weather.

ENERGY-SAVING TIPS

1. Install dryer so that you can use short, straight venting. Turned elbows and long vent tubing tend to increase drying time. Longer drying time means the use of more energy and higher operating costs.
2. Operate dryer using full-size loads. Very large loads use extra energy. Very small loads waste energy.
3. Dry light-weight fabrics separately from heavy fabrics. You will use less energy and get more even drying results by drying fabrics of similar weight together.
4. Clean the lint screen area daily. A clean lint screen helps give faster, more economical drying.
5. **Do not** open the dryer door while drying. You let warm air escape from the dryer into the room.
6. Unload the dryer as soon as it stops. This saves having to re-start your dryer to remove wrinkles.

OPERATING INSTRUCTIONS—COIN METER MODELS

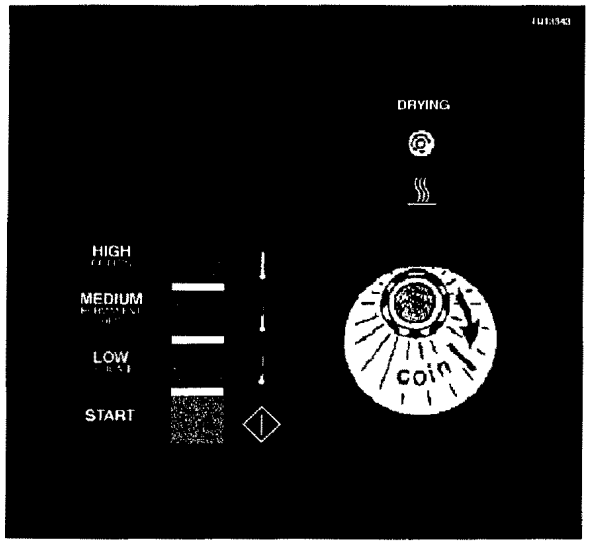
OPERATING INSTRUCTIONS—COIN METER MODELS

1. After loading the dryer with water washed clothes, close the loading door.

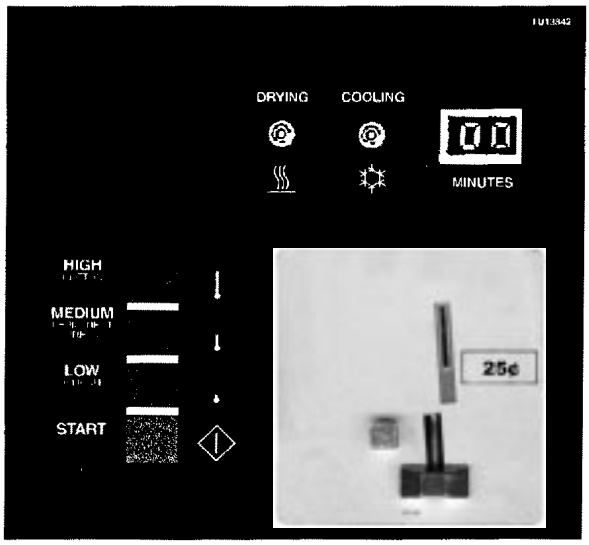
2. **ELECTRO-MECHANICAL COIN METER:** Insert proper coin(s) in slot and turn knob until it stops.
   COMPUTERIZED COIN METER: Insert coin. Amount of drying time will appear on the digital display. Maximum time is 99 minutes. Additional coins may be vended any time during the cycle.

3. Select temperature setting using proper push button.
   HIGH—185° F (85° C) exhaust temperature, *heavy fabrics and hard to dry, (cottons and linens).*
   MEDIUM—150°F (66° C) exhaust temperature, *permanent press, synthetic blends.*
   LOW—135°F (58° C) exhaust temperature, *delicate, sheer fabrics*.

4. Press the **"Start"** button to start the drying and cooling cycles.



ELECTRO-MECHANICAL COIN METER



COMPUTERIZED COIN METER

WHAT IS HAPPENING AFTER STEP 4:

1. Digital display will count down time remaining in cycle (computerized coin meter).

2. The fan motor and basket will revolve.

3. The heat source will be energized.

4. The heated air will mix with the wet clothes and evaporate the moisture.

5. The thermostats will operate at a safe temperature.

6. The heat will shut off and the cooling cycle will begin.

IMPORTANT

IMPORTANT

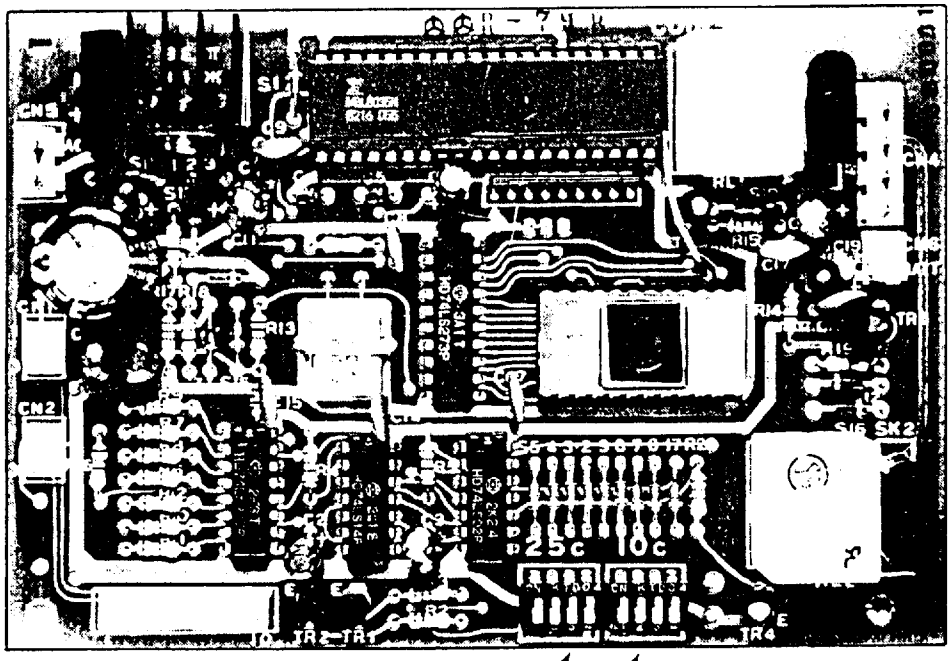
If the tumbler door is opened during the drying cycle, the fan and heat will shut off. Press **"START"** button to resume the cycle.

This dryer is designed for a capacity maximum load. Overloading it will result in longer drying time and damp spots on some of the load.

Maximum operating efficiency depends on proper air flow. The lint screen must be kept clean daily to insure proper circulation of air throughout the dryer.

This commercial dryer has keys for the lint door and access door to burners and controls. This is for the safety of the user.

INSTRUCTIONS FOR SETTING TIME ON "COMPUTERIZED COIN METER"

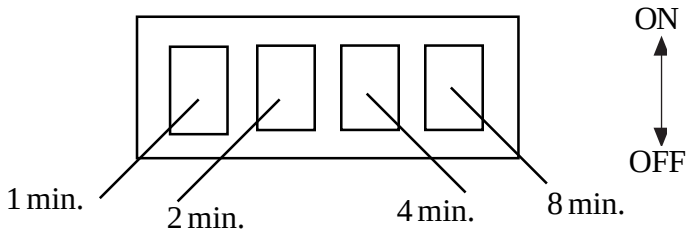


DIP Switch Banks are located here

INSTRUCTIONS FOR SETTING TIME ON COMPUTERIZED COIN METER

1. This dryer is equipped with two banks of four DIP switches each.

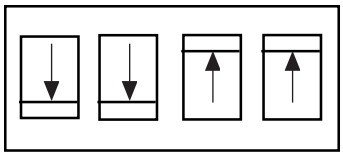
2. Each DIP switch bank consists of 4 small switches each with a specified amount of time (minutes), as shown:



3. To set the time on the DIP bank simply set the appropriate switch to the **ON** (up) position to total the desired amount of time.

NOTE
OFF (down) position equals 0 minute.

EXAMPLE: 25¢ for 12 minutes



MINUTES: 0 + 0 + 4 + 8 = 12 min.

OPERATING INSTRUCTIONS DOUBLE TIMER MODELS

OPERATING INSTRUCTIONS—DOUBLE TIMER MODELS

Step 1. After loading the dryer with water washed clothes, close the loading door.

Step 2. Turn the 60 minute drying (heat) timer to the desired time. The drying cycle light will be on.

Step 3. Turn the 15 minute cooling (air) to the desired time. The cooling light will come on after the drying finishes.

Step 4. Select the temperature desired:

High Heat
185° F (85° C) exhaust temperature, heavy fabrics and hard to dry.

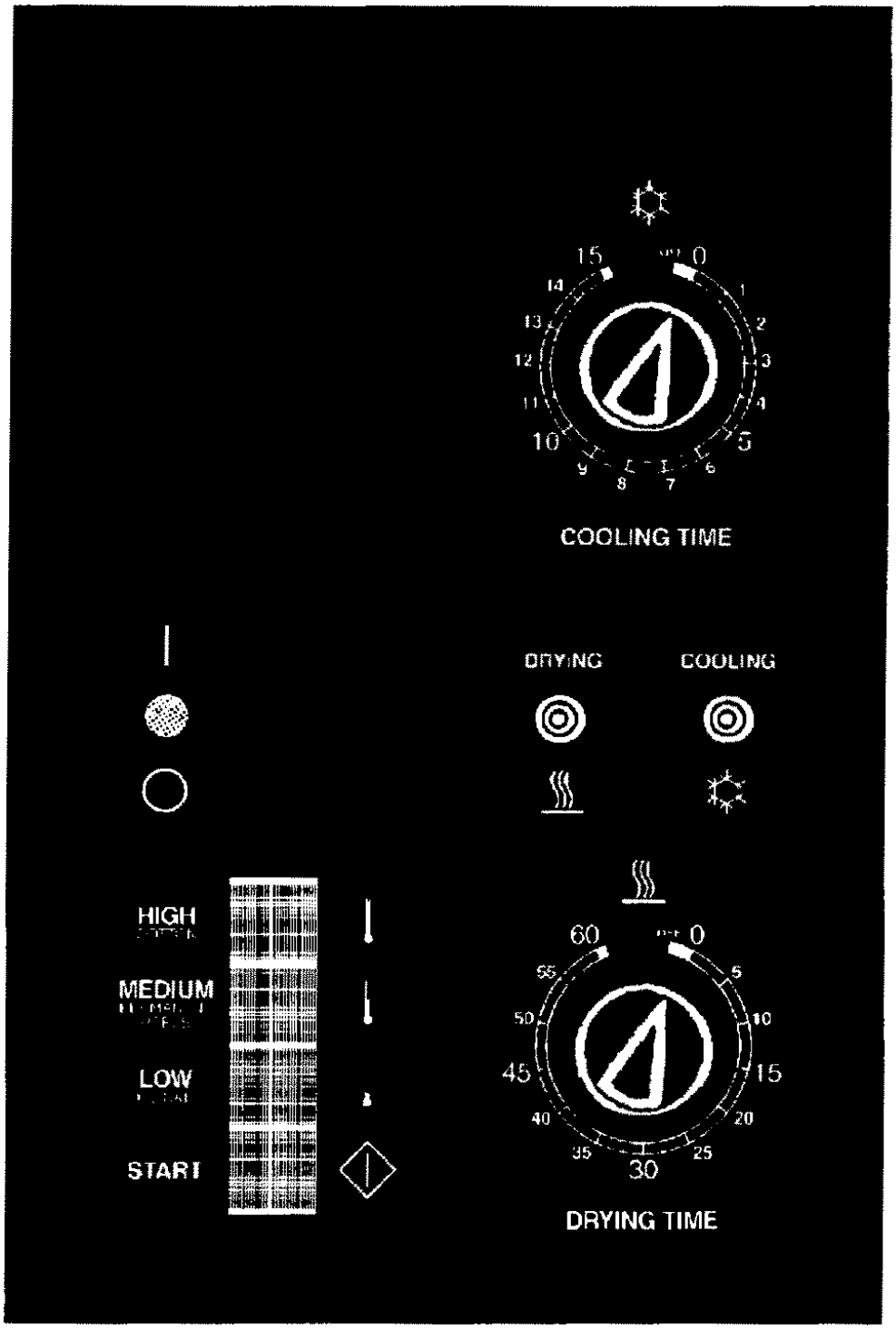
Normal
185° F (85° C) exhaust temperature, cottons and linens.

Permanent Press
150° F (66° C) exhaust temperature, synthetic blends.

Low Heat
135° F (58° C) exhaust temperature, delicate, sheer fabrics.

Step 5. Turn **"on/off"** toggle switch to **"on"** and press the **"push to start"** button to start the drying and cooling cycles.

Step 6. To shut the dryer off at any time during the cycles, switch the **"on/off"** switch to **"off"**.



Double Timer Panel

TROUBLESHOOTING

To help you troubleshoot the dryer, listed below are the most common reasons for service calls and some answers to the problems. Before you call service, please review the following items:

DRYER WON'T START

DRYER WON'T START

1. Is the door completely closed?
2. Are the controls set to the **"on"** position?
3. Did you push the **"start"** control?
4. Has a fuse blown or a circuit breaker tripped?
5. Are the fuses tight?
6. Check for low voltage.
7. Has the bonnet thermostat (gas only) tripped? If so, push to reset.

DRYER WON'T HEAT

DRYER WON'T HEAT

1. Is the dryer set for **"cooling time"** rather than **"drying time"**?
2. Are the gas valves in the dryer and in the main gas line turned on?
3. Check for low or intermittant gas pressure.
4. Check spark ignition module diagnostic light.

CLOTHES ARE NOT SATISFACTORILY DRY

CLOTHES ARE NOT SATISFACTORILY DRY

1. *Timed cycle*—Did you allow enough heating time before the cool-down part of the cycle?
2. Is the lint screen blocked?
3. Is the exhaust duct to the outside clean and not blocked? *(A blocked exhaust will cause slow drying and other problems.)*

GAS DRYER IGNITION

GAS DRYER IGNITION

Refer to the page on *"Instructions for the direct ignition system operation"*. Check to see if the manual gas valve is open. Then reset the dryer controls. All panels, covers, and doors must be in place and closed before starting the dryer.

VERY IMPORTANT
When calling the factory for service, always refer to the model number and serial number.

TROUBLE	CAUSE	REMEDY
Motor will not start.	No power.	Check fuses on circuit breakers. Make sure main control switch is on.
	Incorrect power.	Check power source; voltage, phase and frequency must be the same as specified on electrical rating plate.
	Time off.	Turn timer clockwise to desired time setting.
	Loose wiring connections.	Check wire connections in electrical box on rear of dryer.
	Defective starting relay.	Check coils and contacts.
Motor tripping on thermal overload.	Low voltage.	Check voltage at motor terminals. Voltage must be within ± 10% of voltage shown on motor rating plate. If not, check with local power company for recommended corrective measures.
	Inadequate wiring.	Check with local power company to insure that wiring is adequately sized for load.
	Loose connections.	Check all electrical connections and tighten any loose connections.
	Inadequate air.	Check installation sheet in service manual for recommended make-up air openings.
	Poor housekeeping.	Clean lint accumulation on and around motors.
Basket motor will not run.	Loading door open.	Close door.
	Door switch out of adjustment.	Adjust switch by removing cover and bend actuator lever to clear switch button 3/8" (10 mm) with cover in place.
	Defective door switch.	Replace switch.
	Defective basket motor contractor.	Replace contactor.
Dryer does not stop at end of time period.	Defective timer.	Replace timer.
Motor runs, but basket will not revolve.	V-belt broken.	Replace V-belt.
	V-belt loose.	Adjust belt tension.
	Motor pulley loose. Basket overloaded.	Tighten set screw. Remove load.

Troubleshooting Chart

TROUBLE	CAUSE	REMEDY
Dryer noisy or vibrating.	Not leveled.	Check manual for proper leveling procedures.
	Fan out of balance.	Accidental damage to the fan blade can change the dynamic balance. Damaged fans should be replaced.
	Basket rubbing.	Adjust basket clearance.
	V-belt sheaves.	Tighten set screws. Make sure sheaves are in proper alignment.
	Belt.	Adjust belt tension.
	Foreign objects.	Occcasionally screws, nails, etc., will hang in the basket perforations and drag against the sweep sheets surrounding the basket. Such foreign objects should be removed immediately.
Dryer runs, but no heat.	Incorrect voltage.	Check for correct control voltage - 120V.
	No voltage.	Check power supply, check secondary voltage on transformer and check wiring and wiring diagram.
	Defective gas valve. gas turned off.	Replace coil assembly. Turn manual gas valve on.
	Defective door switch.	Replace door switch.
	Air switch not operating.	Clean out lint compartment daily. Check back draft damper for foreign objects, lint accumulation or other causes that may prevent damper from operating. Check duct work for lint build-up. Check installation sheet to insure that duct work and make-up air openings are adequately sized. Check exhaust outlet. If a screen has been improperly installed on the outlet, it may be clogged with lint or frozen over in winter. Never install a screen on the exhaust outlet. Vacuum within dryer drops to .09 inches (3 mm) or water column, or less, for normal operation of dryer, vacuum reading can be made with a vacuum u-gauge by removing a sheet metal screw in the front panel of dryer, and inserting the rubber tube of the vacuum gauge into screw opening.

TROUBLE	CAUSE	REMEDY
Dryer runs, but no heat. (continued)	Air switch out of adjustment.	See air switch adjustment sheet in service manual.
	Air switch defective.	Replace air switch.
	Gas pressure too low.	Check manifold pressure and adjust to pressure specified on rating plate. If this pressure cannot be obtained, have gas supplier check main pressure.
	Improper orifice.	Orifices have been sized for the type of gas specified on rating plate. Check with gas supplier to determine specifications for gas being used. If different from rating plate, contact factory and obtain proper orifices.
	Direct spark ignition module defective.	Replace direct spark ignition module
	Electric power to heating unit turned off.	Turn power on.
	Line fuse or heater circuit fuse blown to unit.	Replace fuse
	Defective relay.	Replace relay.
	Defective electric elements.	Replace elements.
	Defective thermostat.	Replace thermostat.
	Defective safety overload thermostat.	Replace thermostat.
	Lint compartment door open.	Close door.
Main burners burning improperly.	Burner air shutters closed.	Open for blue flame.
	Dirt in burner.	Blow out.
	High gas pressure.	Adjust gas pressure per rating plate.
	Orifice too large.	Send to factory for correct orifices.
	Restricted or blocked exhaust.	Clean exhaust.
Low or high gas flame.	Incorrect main burner orifices.	Replace orifices. Check factory for correct size.
Dryer too hot.	Incorrect main burner orifice.	Replace orifices. Check factory for correct size.
	Inadequate make-up air.	Make-up air must be 4 to 6 times the exhaust area of the dryer.
	Lint accumulated.	Remove lint.
	Exhaust duct dampers.	Must be full open or replace.
	High gas pressure.	Adjust gas pressure per rating plate.
	Partially restricted or inadequately sized exhaust system.	Check service manual for recommended sizes. Remove obstructions or lint build up from duct work. NEVER use smaller size exhaust duct. ALWAYS use larger size.

TROUBLE	CAUSE	REMEDY
Dryer does not stop at end of time period (6).	Defective timer.	Replace timer.
Dryer runs no steam to coils.	Valve closed.	Check all valves in steam supply and return. Make sure they are open.
	Steam trap blocked.	Remove and clean. Replace if defective.
	Solenoid valve.	On dryers using solenoid temperature control, thermostat controls operation of solenoid valve by advancing thermostat.
	Thermostat.	On dryers using solenoid temperature control, thermostat controls operation of solenoid valve. If defective, replace thermostat.
	Check valve installed incorrectly.	Check for inlet and outlet marking on check valve and invert if necessary.
	Strainer clogged.	Remove plug and blow down strainer or remove and clean thoroughly if heavily clogged.
Water in steam line.	Steam piping installed incorrectly.	Check piping per steam installation instructions.
	Trap not functioning.	Check trap for size and capacity. If dirty and sluggish, clean thoroughly or replace. Check return line for high back pressure, or another trap charging against the trap functioning improperly.
Basket does not reverse.	Reversing timer.	Check timer to see if operating.

DIRECT SPARK IGNITION OPERATION

NOTE: Some models are equipped with a dual ignition system. The dual ignition system contains two direct spark ignition modules in parallel. Each module has its own flame sense circuit and acts independently of the other. If either bonnet limit thermostat opens because of high heat or flame impingement, the entire ignition system will shut down.

1. When a call for heat is received from the control supplying 24VAC to the ignition control module, the pre-purge delay timer begins. This delay time allows any air/sediment to be ejected prior to burner ignition. Following the pre-purge delay period, the gas valve is energized and the spark ignitor sparks for the trial ignition period.

2. When a flame is detected during the trial for ignition period, the spark ignitor shuts off and the gas valve remains energized.

3. If no flame is detected by the flame sense circuit, the ignition control module will go into safety lockout. The valve will be turned off immediately. If the module has multiple retries and no flame is detected, the gas valve is de-energized and the module goes into an interpurge delay. After this delay, the module will attempt another trial for the ignition period. This will continue until the number of retries has been used up. At the time, the module will go into safety lockout.

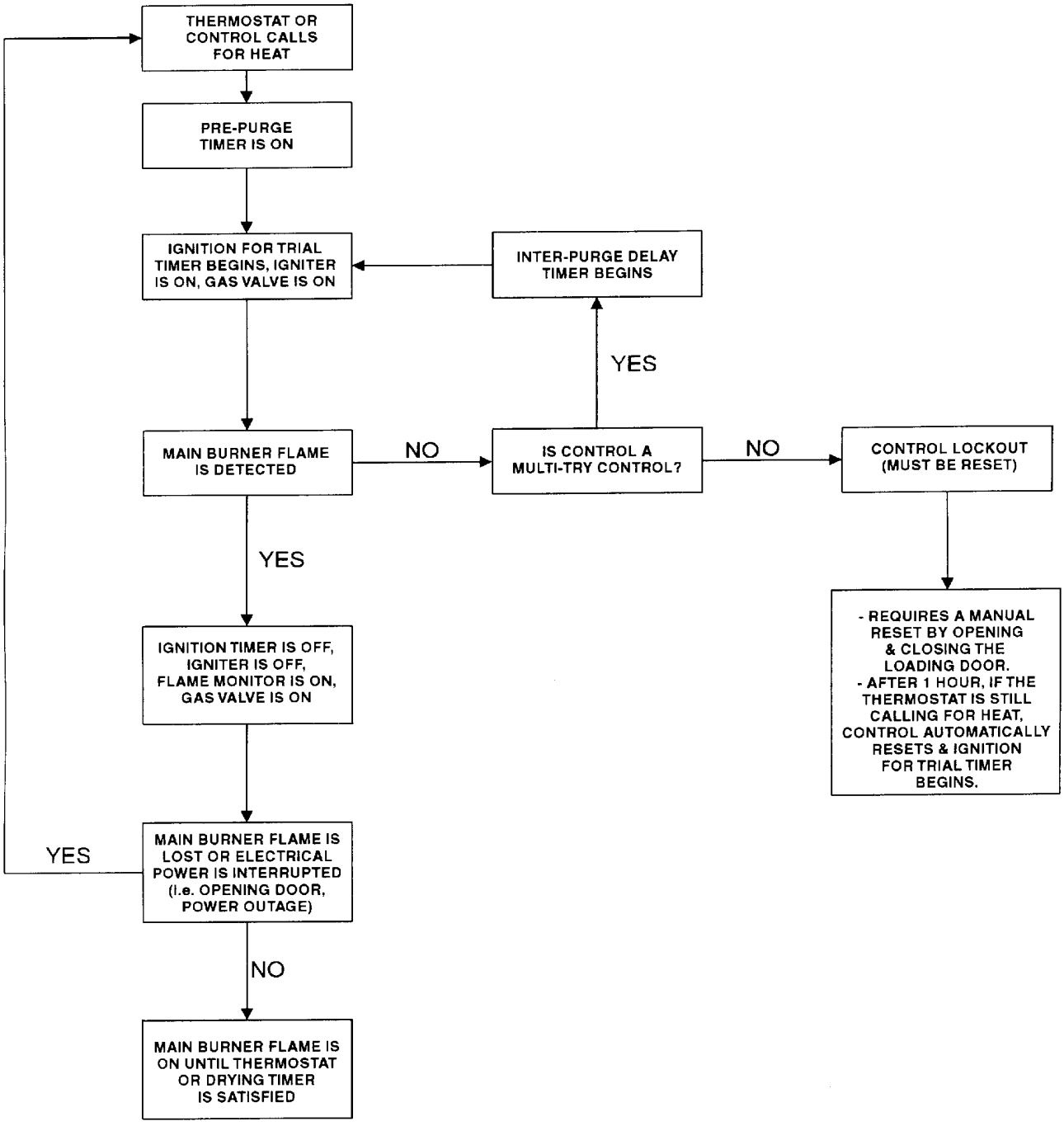
4. Recovery from safety lockout requires one of the following:
   a. A manual reset by opening and closing the loading door.
   b. After one hour if the control thermostat is still calling for heat, the module will automatically reset and the trial for ignition period will start over.

5. Opening the loading door will cause the flame to extinguish. Closing the door and starting the dryer will restart the trial for ignition period.

6. Once the control thermostat has been satisfied and/or the drying timer has been timed out, the ignition control module(s) will be de-energized, the gas valve(s) will be de-energized and the flames will extinguish.

7. The machine will continue to run in a cooldown mode without heat. This process will cool the load to the touch and help to eliminate wrinkling.

DIRECT SPARK IGNITION OPERATION FLOW CHART


THERMOSTAT OR CONTROL CALLS FOR HEAT
PRE-PURGE TIMER IS ON
IGNITION FOR TRIAL TIMER BEGINS, IGNITER IS ON, GAS VALVE IS ON
INTER-PURGE DELAY TIMER BEGINS
YES
MAIN BURNER FLAME IS DETECTED
NO
IS CONTROL A MULTI-TRY CONTROL?
NO
CONTROL LOCKOUT (MUST BE RESET)
YES
- REQUIRES A MANUAL RESET BY OPENING & CLOSING THE LOADING DOOR.
- AFTER 1 HOUR, IF THE THERMOSTAT IS STILL CALLING FOR HEAT, CONTROL AUTOMATICALLY RESETS & IGNITION FOR TRIAL TIMER BEGINS.
IGNITION TIMER IS OFF, IGNITER IS OFF, FLAME MONITOR IS ON, GAS VALVE IS ON
YES
MAIN BURNER FLAME IS LOST OR ELECTRICAL POWER IS INTERRUPTED (i.e. OPENING DOOR, POWER OUTAGE)
NO
MAIN BURNER FLAME IS ON UNTIL THERMOSTAT OR DRYING TIMER IS SATISFIED

GENERAL MAINTENANCE

1. **Clean lint trap daily.** Remove lint before or after each day of operation. A clean lint trap will increase the efficiency of the dryer and the moisture-laden air will be exhausted outside more quickly.

2. **Keep basket and sweep sheets clean.** Clean as often as needed. The basket and sweep sheets are accessible by removing the front panel of the dryer.

3. **Gas burners, steam coils, electric coils.** Check and clean often.

4. **Pulleys and belts.** Keep clean, as oil and dirt will shorten the life of a belt. Check periodically for alignment. Pulley shafts must be parallel and the grooves must be aligned. Check belt tension periodically. Adjust tension by movement of idler bracket. Lubricate idler pulley once every two months, using six grams of high temperature grease. Do not over-grease.

5. **Electric motor.** Keep motor clean and dry. Motors are packed with sufficient grease for 10 years normal service. After that, bearings and housing should be cleaned and repacked one-third full with Chevron grease No. SR1-2. See label on motor for further information.

   If motor overheats, check voltage and wiring. Low voltage, inadequate wiring and loose connections are the main cause of motor failures.

6. **Adjustable leveling bolts.** One at each corner permits accurate alignment of dryer.
   To adjust: Block one corner of dryer up off the floor, loosen hex nut. With wrench, turn bolt clockwise to raise dryer, opposite to lower. Rear bolts are outside of dryer and front bolts are inside lint trap compartment.

GENERAL MAINTENANCE (continued)

7. Periodically clean and examine exhaust system.

8. Keep dryer area clean and free of gasoline, combustible materials and other flammable liquids or vapors.

9. Do not obstruct the flow of combustion (make-up) air and ventilating air.

10. Check gas pressure periodically.

11. Gas burner air inlet shutters can be adjusted for proper flame by following instructions outlined on separate page of this manual.

12. **Main Basket Bearings.** Lubricate once every six months, using six grams of high temperature grease. Do not over-grease.

13. **Steam Heating Units.** Keep steam coils clean. Check periodically and clean as often as required. Remove lint and dirt accumulation from coil fins to avoid decreasing their efficiency.

14. **Clean Out Panel (Energy Saver Gas Models Only).** Remove this panel, located on the energy saver heating unit, and clean the inside area of lint and dirt on a regular basis.

BURNER AIR INLET SHUTTER ADJUSTMENT

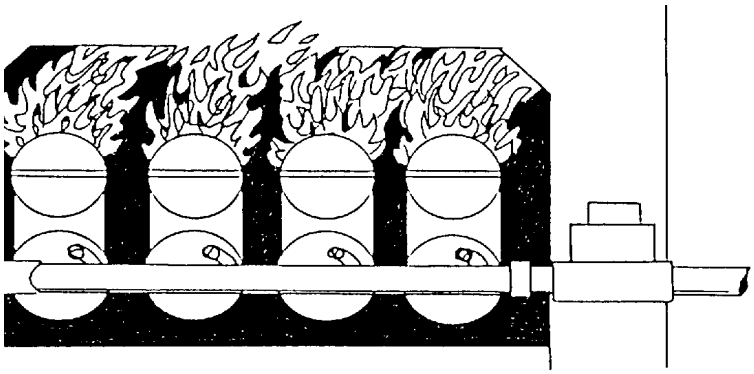
Burner air inlet shutters are correctly adjusted when the flame is primarily blue.

Type of Gas	Burner Air Inlet Shutter Adjustment
Natural gas	Wide open
Liquid petroleum	1/2 Open
Manufactured gas	1/8 Open

AIR SHUTTER ADJUSTMENT

Air Shutter Adjustment

Proper method
Close air shutters to yellow tip, then open air shutters to blue flame tip. Orange tips are impurities in the air such as lint, dust, etc.

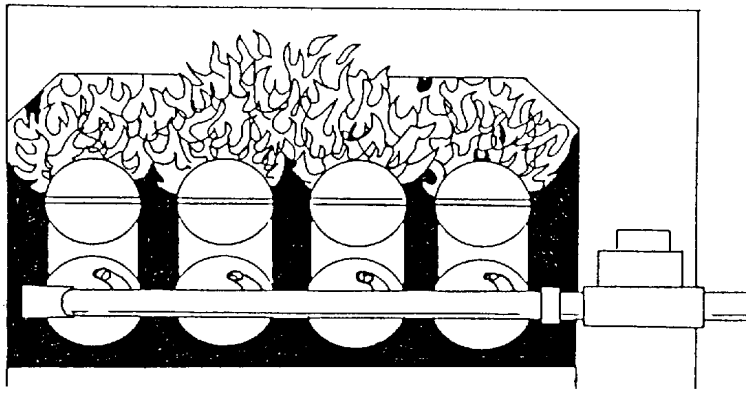


CORRECT

NEED TO ADJUST SHUTTER

Need to Adjust Shutter

Burners air inlet shutters are adjusted insufficient; air is admitted through the burner. Flame pattern is straight up and flame is yellow.

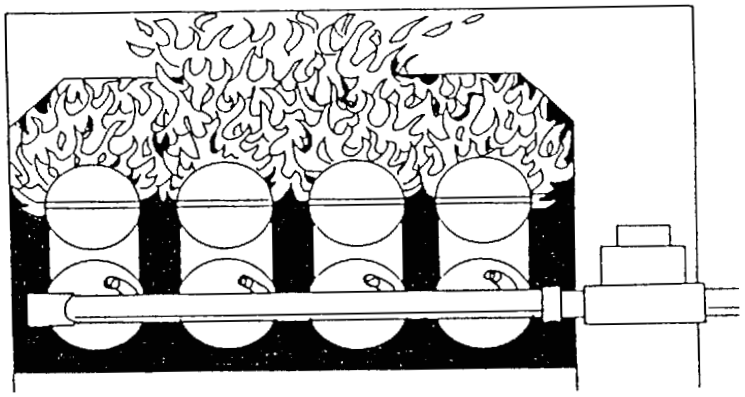


WRONG--NEED TO ADJUST SHUTTER

NEED TO PROVIDE CORRECT AIR FLOW THROUGH THE DRYER

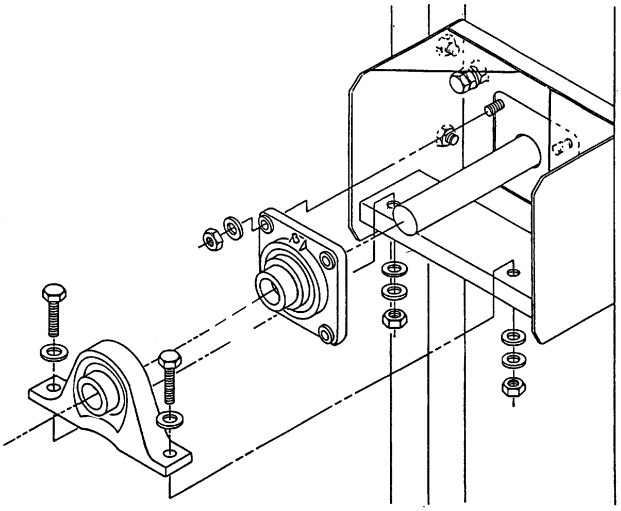
Need to Provide Correct Airflow Through the Dryer

This flame pattern indicates the burner air inlet shutters are correctly adjusted, but air through the dryer is insufficient. This condition indicates excessive lint in the lint compartment, lack of make-up air in the room, restricted exhaust duct, or a vacuum in the room caused by an exhaust fan.



WRONG--NEED TO PROVIDE CORRECT AIR-FLOW THROUGH THE DRYER

Operating Conditions	Grease Intervals
Clean	Every 6 months
Dirty	Every month
Moisture	Every week



REPLACING BEARINGS AND COLLARS INSTRUCTIONS

Step 1 Remove belt guard, V-belt, spacer and basket sheave.

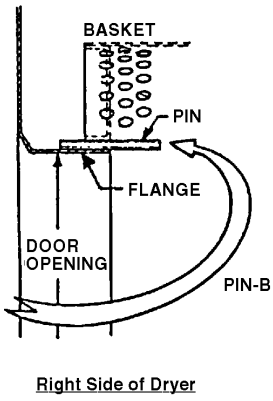
Step 2 Loosen set screws on the flange bearing and on the pillow block bearing.

Step 3 Remove the bolts holding the pillow block bearing and take it off the shaft.

Step 4 Remove the nuts and washers holding the flange basket bearing and take it off the dryer.

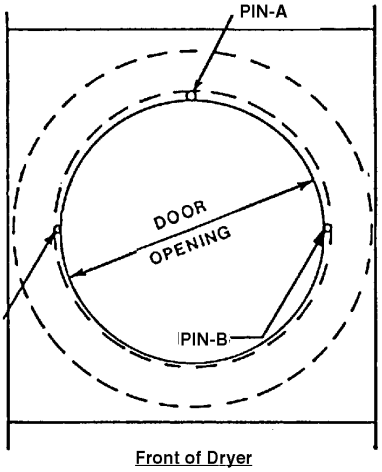
Step 5 Inspect the bearings for damage and replace as necessary, in reverse order of removing them. Before tightening securely, align basket per instructions on separate instruction sheet.

Step 6 Lubrication guide—Bearings never need lubrication. They have been permanently lubricated by the supplier with a high temperature grease.



Right Side of Dryer

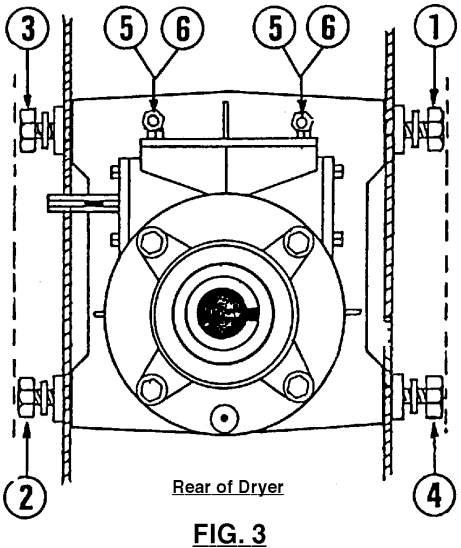
FIG. 1



Front of Dryer

PIN-A - 1/2 (13 mm) DIA.
PIN-B - 3/8 (10 mm) DIA.

FIG. 2



Rear of Dryer

FIG. 3

BASKET ALIGNMENT DOUBLE MOTOR MODEL

Step 1 Loosen the 4 gear reducer mounting bolts (1, 2, 3, & 4) on rear of dryer, and 2 adjusting bolts #5, on gear reducer housing. (figure 3)

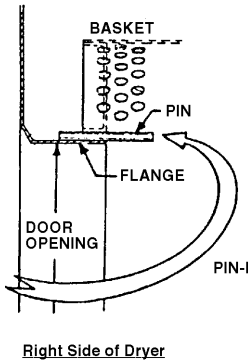
Step 2 Place one “A” and two “B” diameter pins inside the drying compartment between the rim of the basket opening and the rim of the door opening, in the positions shown in figure 1 and figure 2. Check the two “B” pins for equal clearance.

Step 3 With the pins in position, tighten the two “5” bolts until flush against back of dryer. Retighten gear reducer mounting bolts in the numerical order indicated in figure 3. Tighten lock nuts “6” to secure bolts “5” in position. Then remove pins.

Step 4 Check the space between basket and door opening at “A” pin and “B” pin positions (figure 2). If the gap is not approximately the same on both sides; repeat Steps 1, 2, & 3.

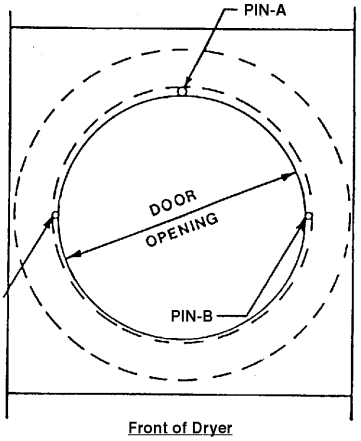
NOTE
Use short sections of round steel rod for pins, or drill bits may be used in place of round rod.

FIG. 1



Right Side of Dryer

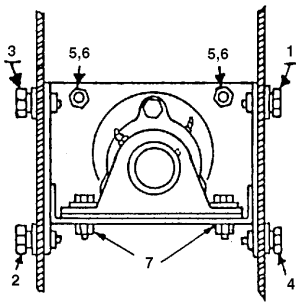
FIG. 2



Front of Dryer

PIN-A - 1/2 (13 mm) DIA.
PIN-B - 3/8 (10 mm) DIA.

FIG. 3



BASKET ALIGNMENT SINGLE MOTOR MODEL

Step 1 Loosen the set screws on the flange and pillow block bearings.

Step 2 Loosen the 4 side bolts, “1, 2, 3, 4,” on the basket bearing bracket. (see figure 3) Loosen the two adjusting bolts and locknuts “5, 6,” inside the bracket. And loosen the bolts “7,” on the pillow block bearing.

Step 3 Place one “A” and two “B” diameter pins inside the drying compartment between the rim of the basket opening and the rim of the door opening in the positions shown in figures 1 and 2. Check the two “B” pins for equal clearance.

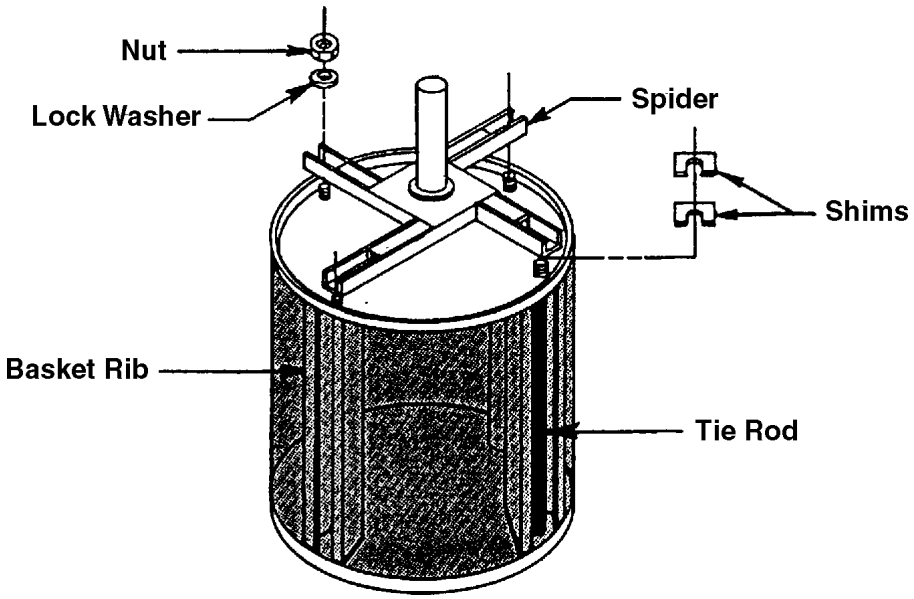
NOTE
Push the basket toward the rear.

Step 4 With the pins in position, tighten the set screws on the bearing races.

Step 5 Tighten the side bolts “1, 2, 3, 4,” in numerical order. Tighten the bolts “7” on the pillow block bearing. And tighten the bolts “5” and locknuts “6”.

Step 6 Remove the aligning pins.

CAUTION
Check to see that the set screws are wrench tight on the bearings.



BASKET SHIMMING INSTRUCTIONS

This procedure is normally necessary when replacing either the basket or the spider assembly on any dryer. Proper shimming is crucial to obtain a true running basket.

A. Align the basket as per instructions in the manual.

B. Rotate the basket to determine where the most out-of-round point is (where the basket scrapes or comes closest to scraping the sweep sheet).

C. Mark this position and the nearest rib to this position.

D. Remove the basket (do not loosen the alignment bolts).

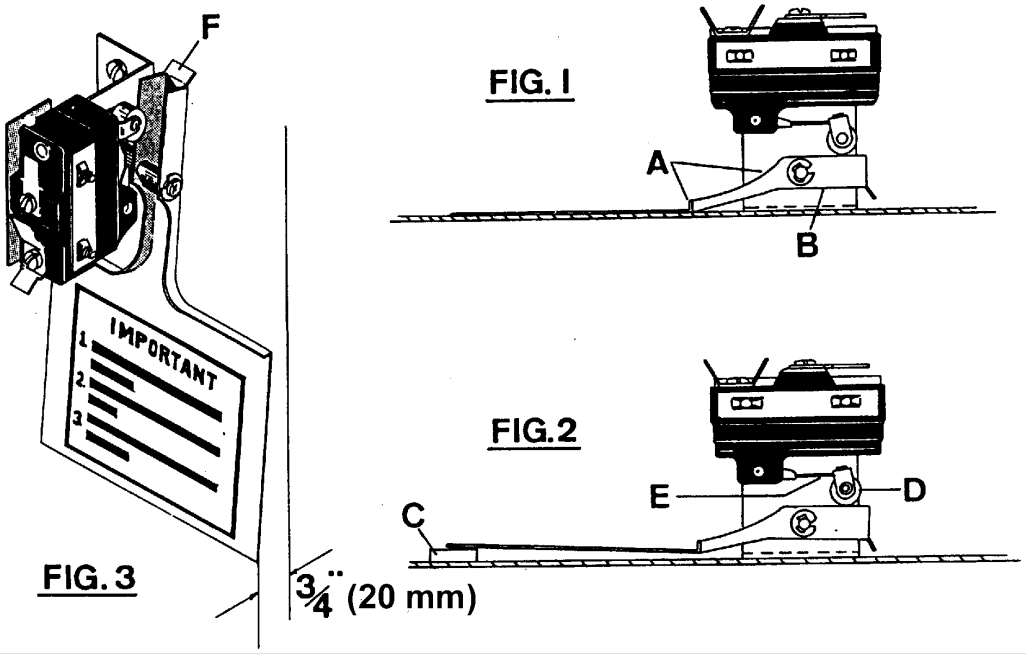
E. With the basket on the floor (spider up), place one or two shims between the spider leg and the back of the basket at the marked rib position. (see drawing)

F. Re-insert spider and basket assembly and re-check cylinder.

G. If at this point, basket is still out-of-round, procedure must be repeated starting with Step B.

Upon completion of shimming process, realignment of basket is necessary.

NOTE
If the point mentioned in *Step B* is between two ribs, both ribs might have to be shimmed.



AIR SWITCH ADJUSTMENT

1. Shut off current; disconnect leads and remove air switch.

2. Lay air switch assembly on flat surface. Adjust air blade at "A" (figure 1), so that air blade lays flat and surface "B" is parallel to the flat surface.

3. Place 3/8" (10 mm) x 5/8" (16 mm) spacer bar or equivalent "C" (figure 2), under air blade in position shown; hold switch mounting bracket firmly and adjust switch actuator "D" with needle nose pliers at "E" by twisting actuator right or left, whichever is needed, so that switch closes when end of air blade engages bar "C".

4. Maximum opening of air switch must be no greater than 3/4" (figure 3). Bend tab "F" in or out to maintain this dimension.

5. Re-install air switch assembly on rear of dryer.

6. Re-check operation of air blade. Switch must close before air blade engages face of opening and re-open before stop "F" engages.

OPERATION AND MAINTENANCE

OPERATION AND MAINTENANCE

After Start Up

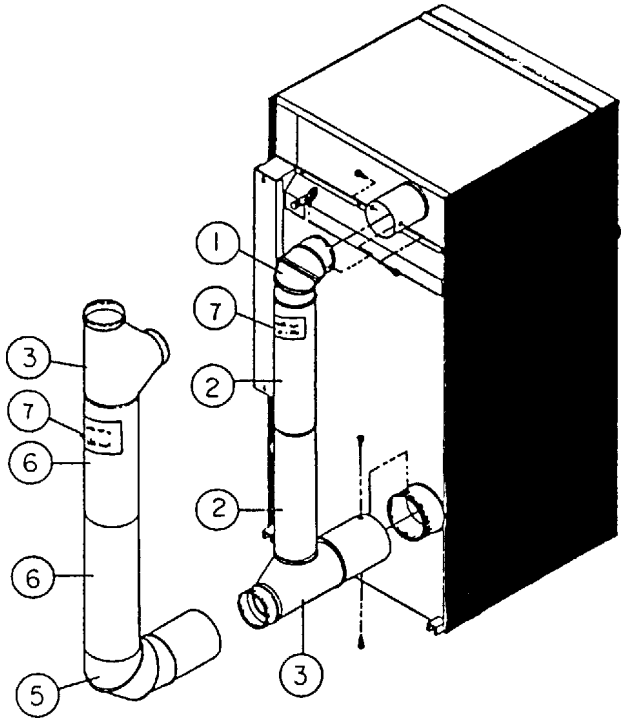
The Gear reducer is shipped filled with oil to the right level and after two weeks or 100 hours of operation, drain the oil, and flush the gear reducer with a light flushing oil. The original oil can be used for re-filling if it has been filtered; otherwise, new oil must be used. After this, change the oil every six months or 2500 hours of operation.

CAUTION

- **USE AGMA 8EP TYPE OIL; CISSELL PART #TU3465 *ONLY* ! !**
- The gear reducer is equipped with two oil plugs located on the right side as viewed from the back of the dryer.
- To change oil: remove the lower oil plug and drain the used oil.
- Re-install the lower oil plug and remove the upper oil plug. Add new oil until the oil starts to spill out. Re-install the upper oil plug.

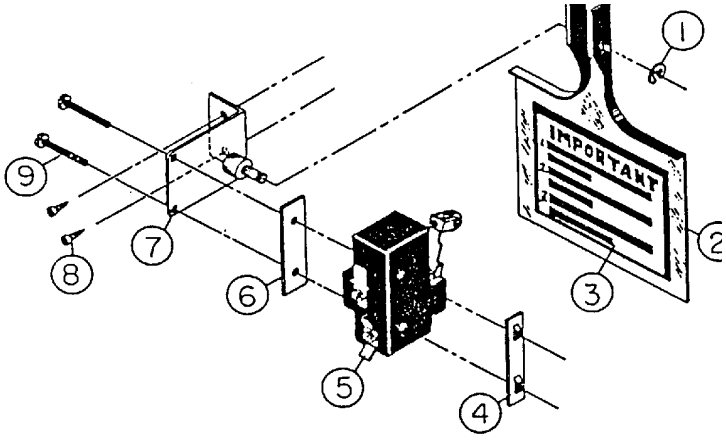
Duct Work Parts

1	TU8053	Duct Elbow
2	TU8055	Duct Long
3	TU8052	Duct Tee
5	TU7375	Extended Elbow
6	TU8177	Duct Short
7	TU9161	Installation Label



Air Switch Assembly
TU8206

1	F888	"E" Ring
2	TU2463	Actuator Arm
3	TU3476	Air Switch Decal
4	TU1771	#6 Tinnerman Nut
5	TU8155	Air Switch
6	TU1770	Insulator
7	TU8171	Air Switch Bracket
8	TU7733	#8 - 18 x 1/2" Self Drilling Screw
9	TU3219	#6 x 1" Round Head S.M.S.



INSTRUCTIONS FOR DRYERS WITH REVERSING CONTROL TIMER

Instruction

In operation, coasting of basket increases, making it necessary to readjust reversing timer.

CAUTION
Failure to do this will cause the thermal overload units for the basket to cut-out unnecessarily and probably damage the gear reducer.

Adjustment of reversing timer dwell time

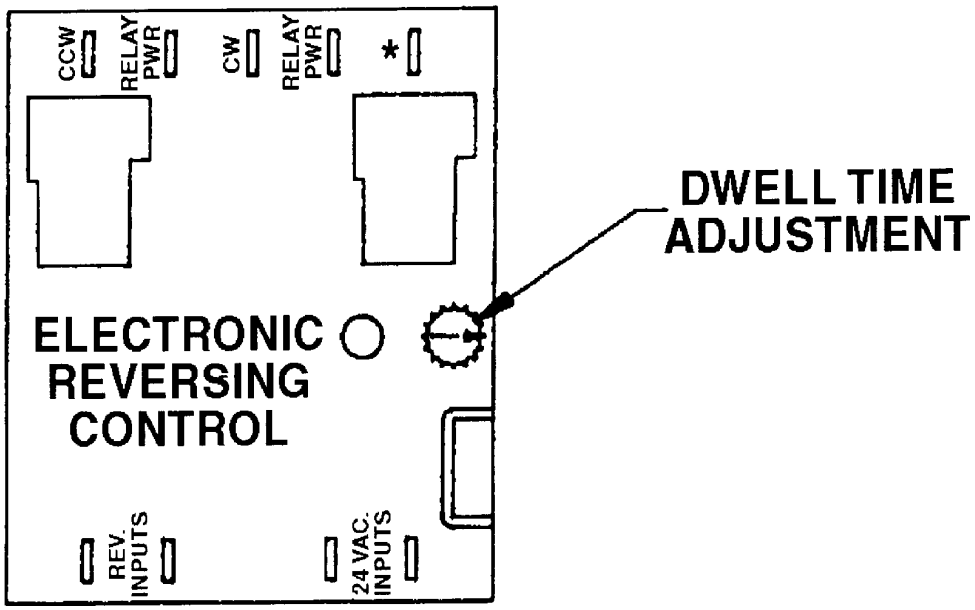
CAUTION
Dryer power supply must be shut off before adjusting timer.

The dwell time is the time from when the motor turns “off”, to when it turns “on” again in the opposite direction.

Turning the dwell adjustment knob counter-clockwise increases the dwell time and turning it clockwise decreases the dwell time.

Recommended dwell time for the basket to stop completely is 5 to 7 seconds. Minimum basket stopping time is 4 seconds.

NOTE:
Select non-reversing or reversing before starting dryer.



INSTRUCTIONS FOR DRYERS WITHOUT REVERSING CONTROL FAN AND BASKET ROTATION

Instructions

NOTE:
Fan rotates counter-clockwise as viewed from back end of motor. See arrow on motor support.

Basket rotates counter-clockwise as viewed from back end of motor. See arrow on motor support.

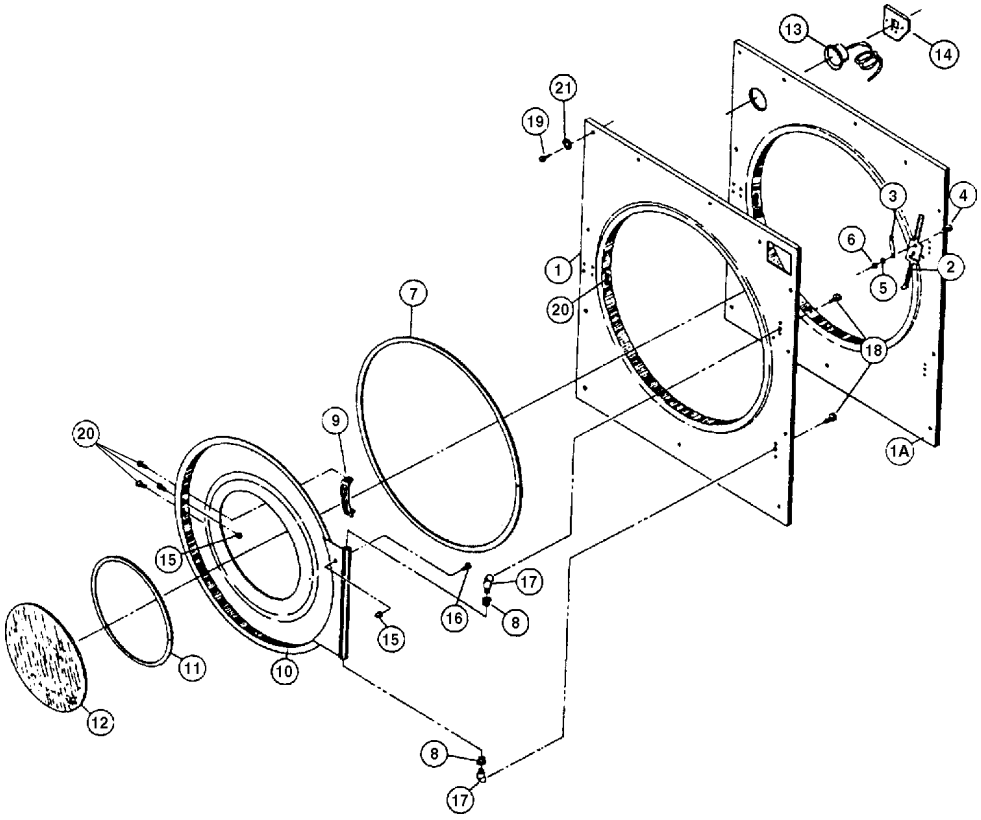
Basket rotates counter-clockwise as viewed from front of tumbler.

To change rotation of both fan and basket, reverse power leads L1 and L2.

To change rotation of fan only, reverse motor leads F1 and F2.

To change rotation of basket only, reverse motor leads B1 and B2.

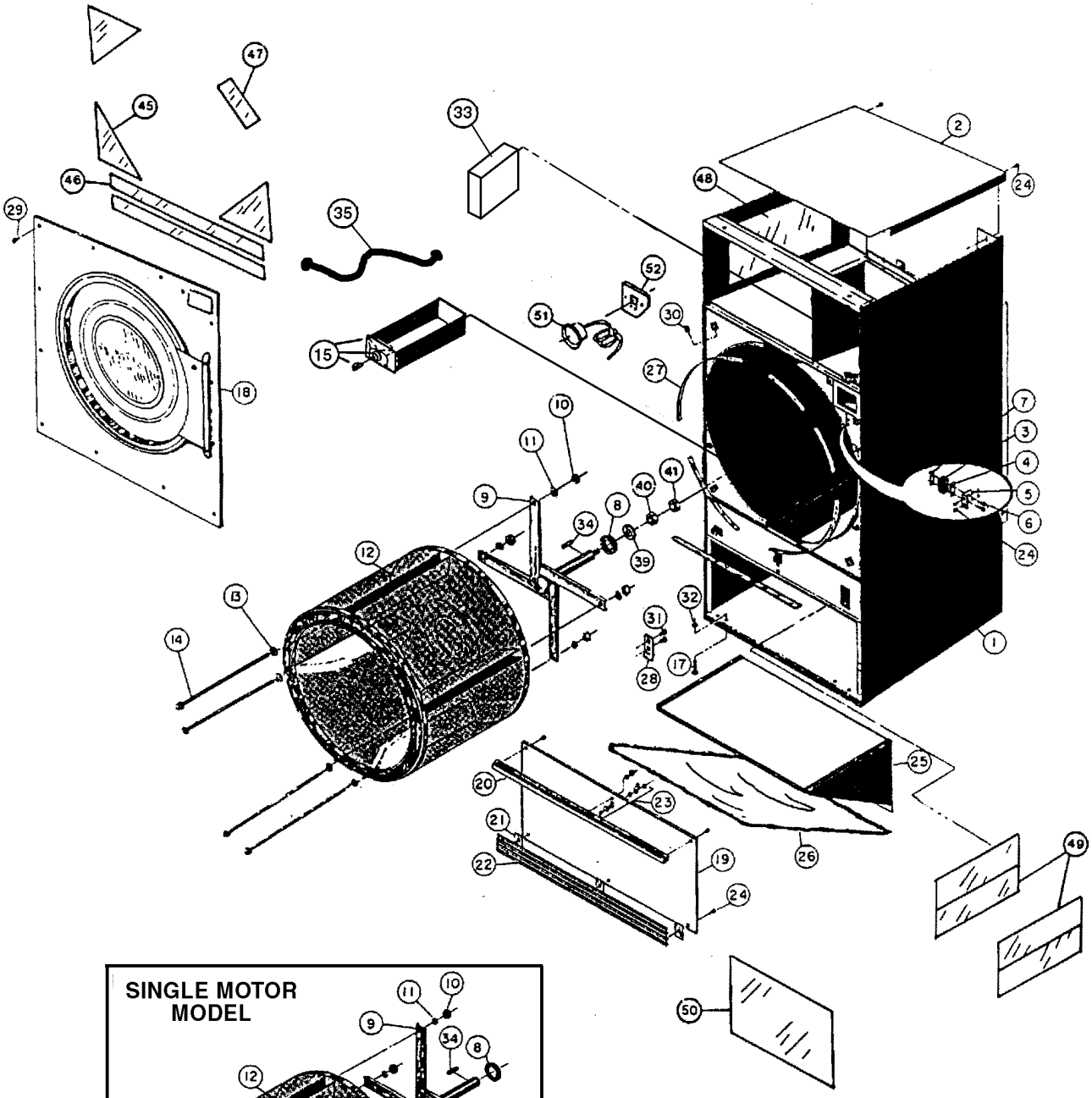
TU5810 Front Panel and Door Assembly (Coin Vault) (Specify Color)
TU6056 Front Panel and Door Assembly (Time and Temperature) (Specify Color)
TU7627 Front Panel and Door Assembly (Time and Temperature) with Thermometer

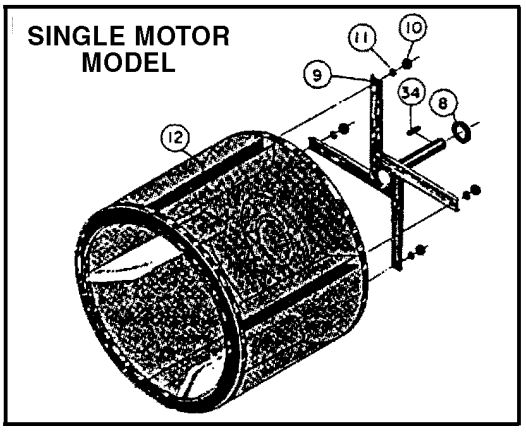


1	TU10784	Front Panel (for Coin Vault) (Specify Color)
1a	TU10785	Front Panel (for Time and Temp.) (Specify Color)
	TU10787	Front Panel (for Thermometer) (Specify Color)
2	TU2194	Door Switch Actuator
3	TU2105	Actuator Spring
4	M262	#8 - 32 Truss Head Screw
5	FB187	#8 Split Lockwasher
6	TU3266	#8 - 32 Hex Nut
7	TU5288	Basket Door Seal
8	PIF172	Delrin Bearing (2 required)
9	TU2874	Basket Door Handle
10	TU5859	Basket Door (Specify Color)
11	TU1692	Rubber Gasket
12	K105	Door Glass
13	TU3593	Thermometer (Optional)
	TU3816	Lens Repl. (Texas Gage ONLY)
	TU8475	Lens Repl. (Marshaltown Inst. ONLY)
	TU11193	Lens Repl. (Weiss)
	TU13213	Lens Repl. (Weiss)
14	TU6766	Thermometer Mtg. Plate
15	TU4840	#10 - 32 Hex Crown Nut
16	TU4839	#10 - 32 x 3/8" Machine Screw
17	TU2236	Hinge Posts
18	TU2836	5/16" - 18 x 1/2" Hex Head Cap Screw
19	TU2878	#10 x 5/8" Sheet Metal Screw
20	TU5158	Door Catch & Latch Asm. (w/rivets)
21	M271	#8 Internal Tooth Lockwasher

TU4827—Actuator Assembly consists of
Ref. No.s 2, 3, 4, 5, & 6

TU5857—Basket Door Assembly consists of (Specify Color)
Ref. No's. 7, 8, 9, 10, 11, 12, 13, 14, 15, & 16





Grease to be applied to all bearing shafts. #42-032-6015 Grease Lubriplate #310- 1 lb. can OR 14.5 Oz. Tubes- Lubriplate No. 930-2 Multipurpose Grease #10098.

Parts—50 lb. Laundry Dryer—Front Exploded View

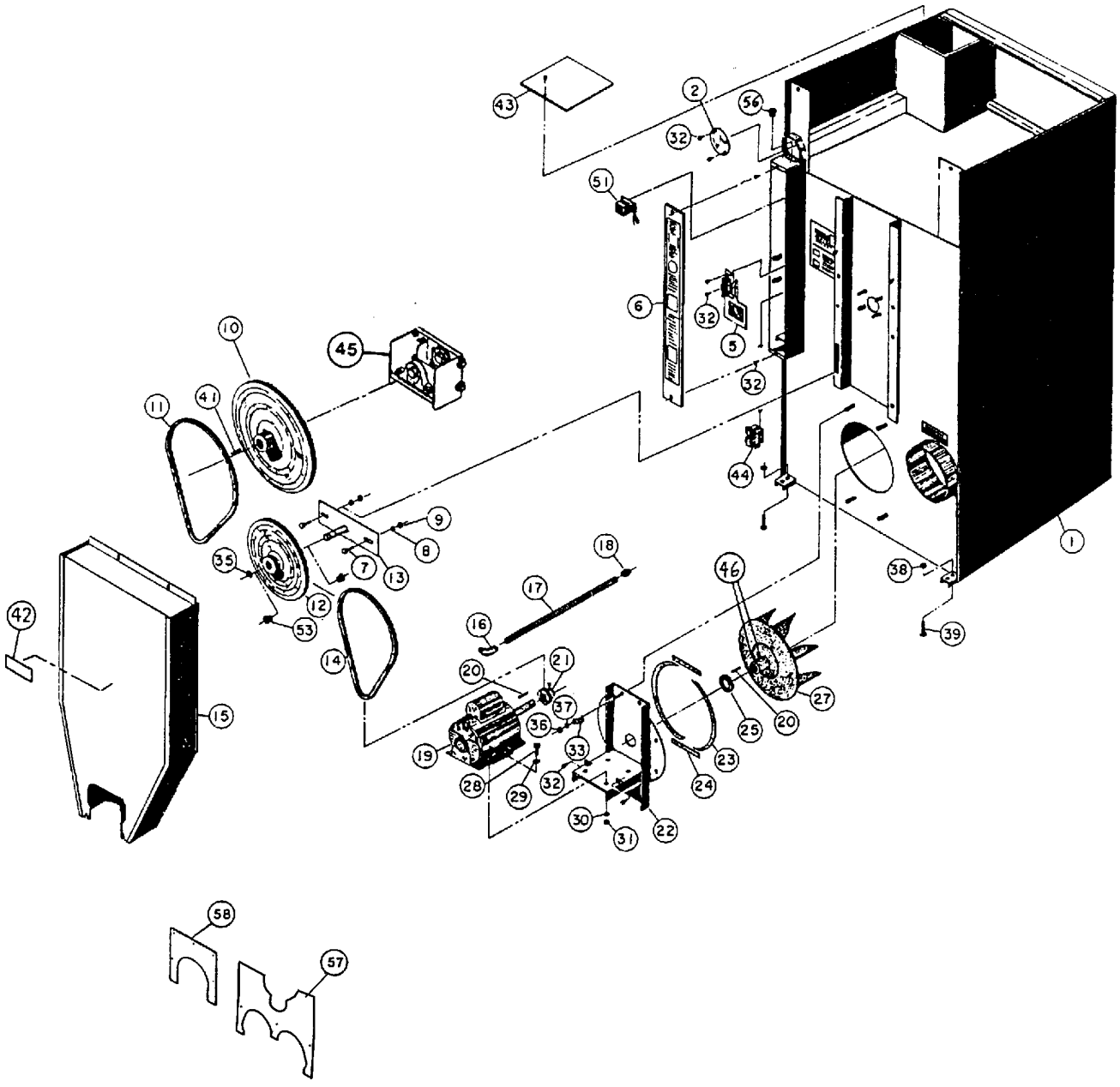
1	TU9594	Jacket - Timer - 2 Motor
	TU11660	Jacket - C/M - 2 Motor
	TU13935	Jacket - C/M - 1 Motor
	TU13924	Jacket - Timer - 1 Motor
2	TU2621	Solid Top (Gas)
3	TU1979H	Door Switch
4	TU1770	Insulator
5	TU2373	Door Switch Mounting Bracket
6	TU3219	#6 x 1" Sheet Metal Screw
7	TU1771	Tinnerman Twin Nut
8	TU108	Felt Seal
9	K21	Spider Welded Assembly
		(Single Motor Model)
	K108	Spider Welded Assembly
		(Double Motor Model)
10	TU2882	1/2" - 20 Hex Nut
11	TU2831	1/2" Split Lockwasher
12	TU6822	Basket Weldment
13	TU2883	1/2" Cut Washer
14	TU2313	Tie Rod
	TU5490	Shim (3 required)
		(See Instructions for Shimming)
15	TU9225	Coin Vault, Lock and Key
17	TU3211	3/8" - 16 x 2-1/2" Leveling Bolt
18	TU5810	Front Panel and Door Assembly
		(For Coin Vault) (Specify Color)
	TU13947	Front Panel Assy. - Energy Saver
		(Specify Color) C/M
	TU6056	Front Panel and Door Assembly
		(For Time and Temperature)
		(Specify Color)
	TU13946	Front Panel Assy. - Energy Saver
		(Specify Color)
19	TU5566	Lint Door Welded Assembly - C/M
		(Specify Color)
	TU13477	Lint Door Welded Assembly -
		Timer Models (Specify Color)
20	TU7473	Handle
21	TU2710	Trim Holder
22	TU2385	Trim
23	TUB1867	Lock and Key - Coin Meter Models
	K457	Latch Assembly - Timer Models
24	TU7733	#8 x 1/2" Self Drill Screw
25	TU10290	Lint Trap Housing Assembly ONLY
26	TU10362	Self-Cleaning Lint Screen ONLY
	TU5225	Lint Screen Frame ONLY
27	TU5876	Sweep Sheet Gaskets
28	TU3206	Lock Plate - Coin Meter Models
29	TU2878	#10 x 5/8" S.M.S.
30	TU2877	#10 Speed Nut
31	TU3209	#14 x 5/8" Screw (Pkg. of 6)
32	TU4937	3/8" - 16 Jam Nut
33	GA-00765-0	Spark Ignition Mount ,1-Trial
		(Gas Only)
	TU13627	Spark Ignition Mount, 1-Trial
		(Gas Only) (Australia Only)
34	TU5887	Key - Single Motor
	TU5240	Key - Double Motor**
35	GA-00803-0	Cable, Hi-Voltage DSI
39	TU14062	Flat Washer (2 each)**
40	TU3537	Full Nut**
41	TU3536	Jam Nut**
45	TU7735	Insulation (3 each)*
46	TU8107	Insulation (2 each)*
47	TU8108	Insulation (1 each)*
48	TU7793	Insulation (1 each)*
49	TU8152	Insulation (4 each)*
50	TU8153	Insulation (1 each)*
51	TU3593	Thermometer (Optional)
	TU3816	Lens Repl. (Texas Gage ONLY)
	TU8475	Lens Repl. (Marshaltown
		Inst. ONLY)
	TU11193	Lens Repl. (Weiss)
	TU13213	Lens Repl. (Weiss)
52	TU6766	Thermometer Mtg. Plate

* Used on Energy-Saver Models ONLY

** Double Motor Models ONLY

TU5808 Lint Door Assembly consists of 19-24 (C/M Models only)

TU13476 Lint Door Assembly consists of 19-24 (Timer Models only)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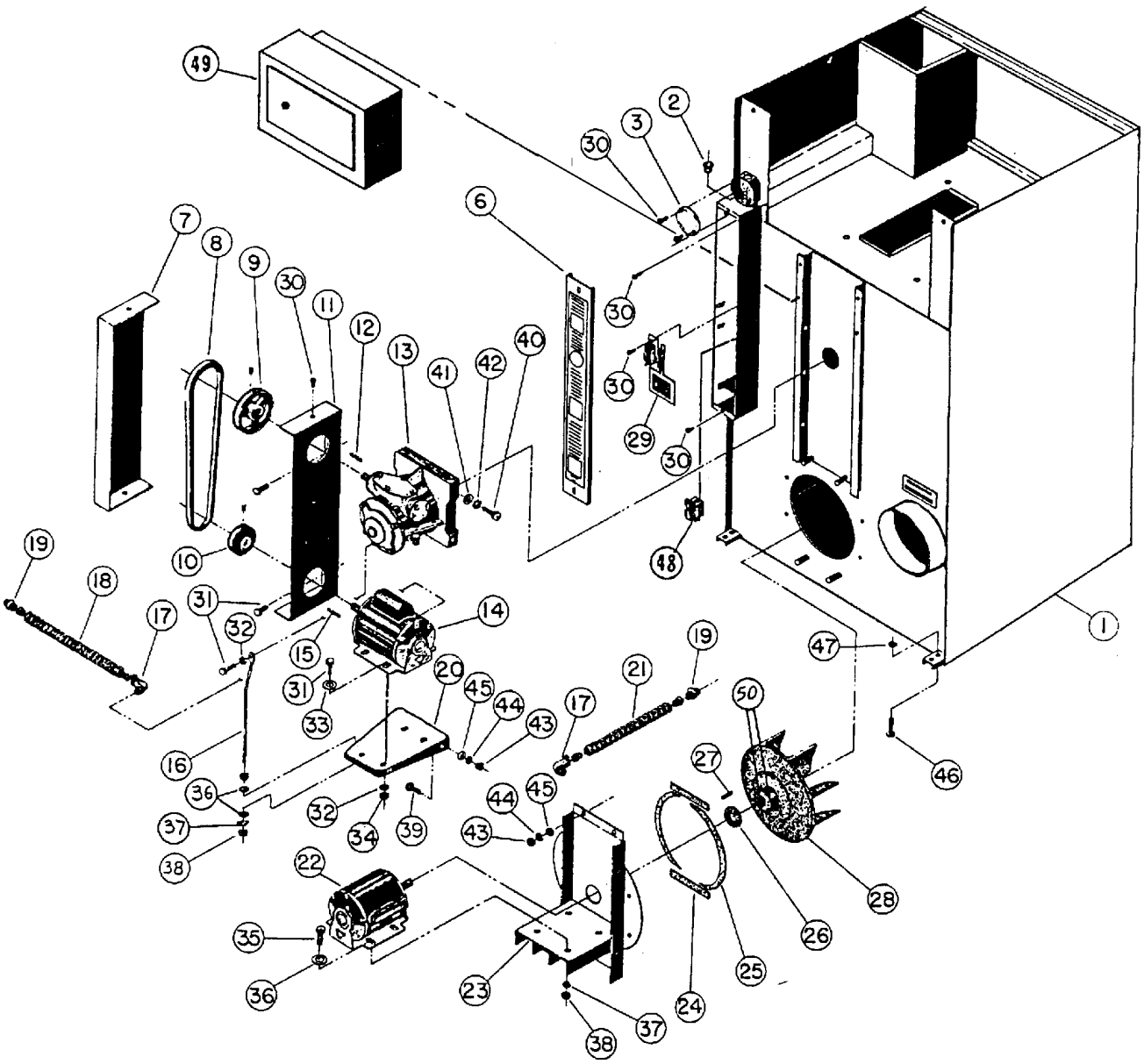
50 lb. Laundry Dryer - Single Motor Model - Rear View

1	TU13935	Jacket (Coin Meter)
	TU13924	Jacket (Timer)
2	SB170	Junction Box Cover
5	TU8206	Air Switch Assembly
		(See Separate Page)
6	TU5890	Control Box Cover
7	TU12576	Carriage Bolt - 3/8" - 16 x 1"
8	VSB134	3/8" Split Lockwasher
9	TU4787	3/8" Hex Nut
10	TU5446	Basket Sheave - 50/60 Hz.
11	TU5447	V-Belt - 4L660 - 50/60 Hz.
12	TU5217	Idler Sheave - 50/60 Hz.
13	TU12803	Idler Bracket with Grease Fitting
14	TU6725	V-Belt (50 Hz.)
	TU4794	V-Belt (60 Hz.)
15	TU12799	Rear Guard with Cover Plate
16	TU4791	Right Angle Connector
17	CFB4200	Cable - 42" Long
18	TU4790	Straight Connector
19	- - - - -	Specify Motor No., Voltage,
		Phase and Hz.
20	TU4684	Key
21	TU7603	Motor Sheave, 60 Hz. with
		Set Screw
	TU12802	Motor Sheave, 50 Hz. with
		Set Screw
22	TU5849	Motor Mount - 50/60 Hz.
23	TU2473	Side Gasket
		(2 Required)
24	TU2474	Top and Bottom Gasket
		(2 Required)
25	TU2476	Felt Seal
27	TU5874	Fan Wheel with Set Screws
		60 Hz. Gas Models
	TU8740	Fan Wheel with Set Screws
		50 Hz. Gas Models and
		50/60 Hz. Steam, Electric
28	TU5439	Hex Head Screw - 5/16" - 18 x 3/4"
29	VSB130	Cut Washer - 5/16"
30	TU2814	Split Lockwasher - 5/16"
31	C249	Hex Nut - 5/16"
32	TU7733	Self Drilling Screw
33	PT196	Cable Strap
35	TU3247	Retaining Ring
36	TU4787	Hex Nut - 3/8"
37	VSB134	Lockwasher - 3/8"
38	TU4937	Jam Nut - 3/8"
39	TU3211	Leveling Bolt - 3/8" - 16 x 2-1/2"
41	TU5887	Key
42	TU10418	Lubrication Label
43	TU10651	Mechanism Box Cover
		(Steam Dryer ONLY)
44	TU13463	Relay - 9A, 3 Pole w/Aux.
	TU13516	Relay - 12A, 3 Pole w/Aux.
45	- - - - -	Cast Iron Bearing and
		Bracket Assembly (See separate
		page for parts breakdown)
46	TU13408	Round Set Screw
51	TU13480	Transformer - 240V/24V
	TU13515	Transformer - 120V/24V
	TU13514	Transformer - 460V/24V
	TU13642	Transformer - 575V/24V
	TU13643	Transformer - 380-415V/24V
53	TU7184	Bronze Bushing (2 each)
56	TU2372	Bushing - 7/8"
57	TU13044	Motor Adapter Plate
58	TU10359	Motor Adapter - 3 Ph. ONLY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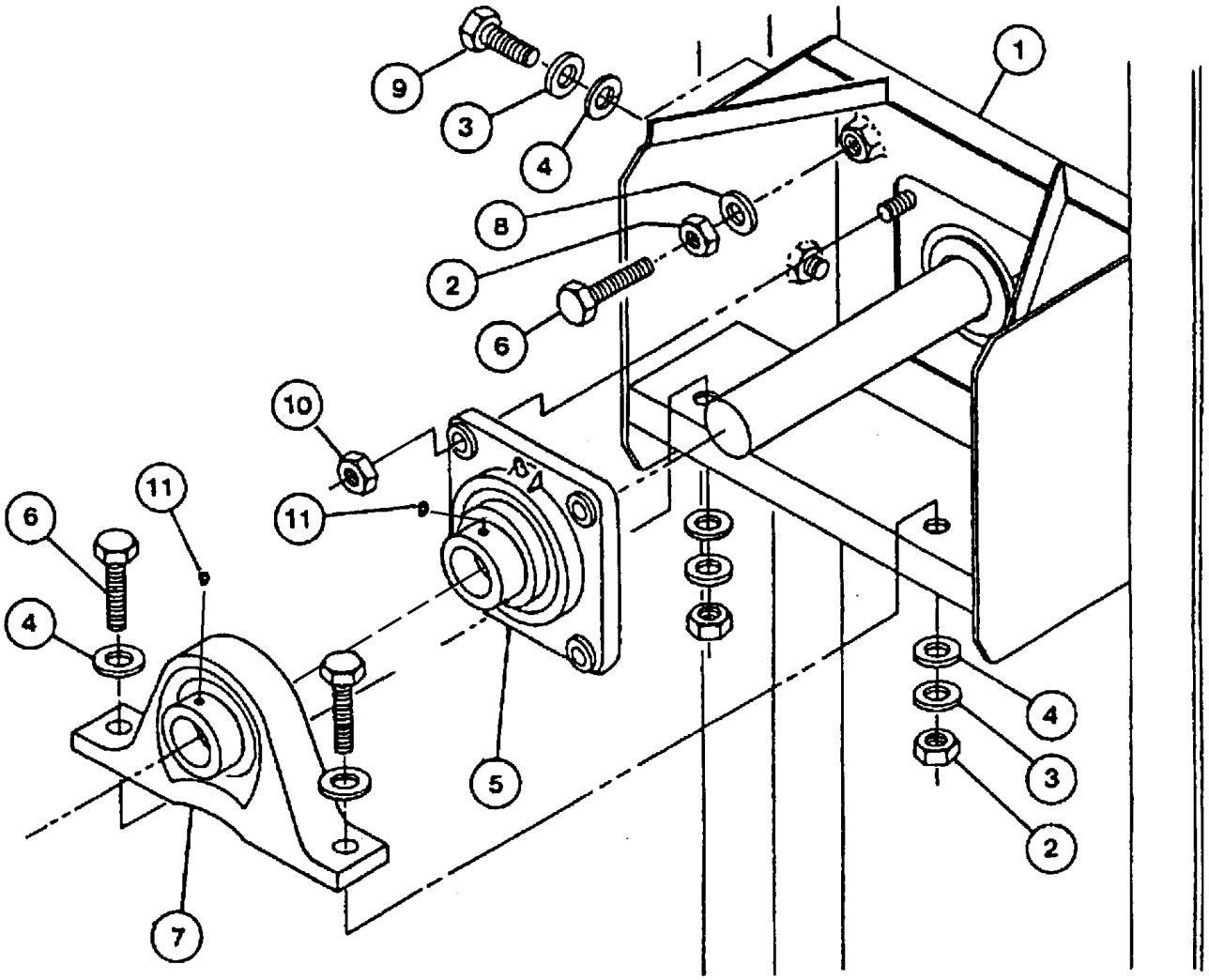
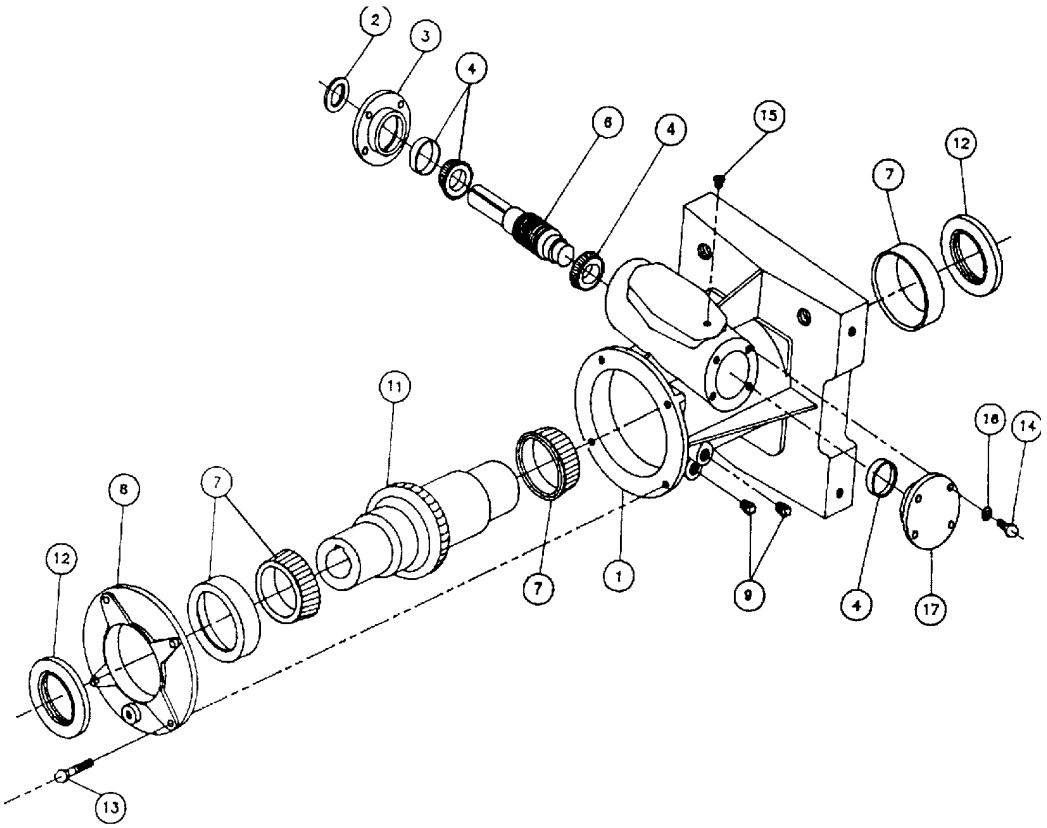
50 lb. Laundry Dryer - Double Motor Model - Rear View

1	TU11660	Jacket (Coin Meter Model)
	TU9594	Jacket (Timer Model)
2	TU2372	Bushing
3	SB170	Junction Box Cover
6	TU5890	Control Box Cover
7	TU3857	Belt Guard Cover
8	TU2317	V-Belt 46-380 - 50/60 Hz.
9	TU6722	Gear Sheave (AK-51H) with Set Screw, 60 Hz.
	510101040	Gear Sheave (AK-46H) with Set Screw, 50 Hz.
	TU2833	Bushing, H-5/8 for Sheave (not shown)
10	TU7334	Motor Sheave (AK-34H) with Set Screw, 60 Hz.
	510101041	Motor Sheave (AK-39H) with Set Screw, 50 Hz.
	TU2833	Bushing, H-5/8 for Sheave (not shown)
11	TU5254	Belt Guard Mounting
12	TU4684	Shaft Key
13	TM100	Small Gear Reducer
14	(See Page !6)	Basket Motor (Specify Motor Number and Voltage)
15	TU4684	Shaft Key
16	TU8608	Belt Adjusting Rod
17	TU4791	Right Angle Connector
18	CFB2000	1/2" Greenfield Cable - 20" Long
19	TU4790	Straight Connector
20	TU33	Motor Drive Bracket
21	CFB3000	1/2" Greenfield Cable - 30" Long
22	(See Page 16)	Fan Motor (Specify Motor Number and Voltage)
23	TU2376	Motor Mount (50/60 Hz.)
24	TU2474	Top and Bottom Gasket (2 Required)
25	TU2473	Side Gasket (2 Required)
26	TU2476	Felt Seal
27	TU4684	Key
28	TU5874	Fan Wheel with Set Screws 60 Hz. Gas Models
	TU8740	Fan Wheel with Set Screws 50 Hz. Gas Models and 50/60 Hz. Steam, Electric
29	TU8206	Air Switch Assembly (See separate page)
30	TU7733	8 x 1/2" Self Drill Screw
31	RC344	1/4" - 20 x 3/4" Cap Screw
32	TU2846	1/4" Lockwasher
33	TU2847	1/4" Cut Washer
34	TU4934	1/4" - 20 Hex Nut
35	TU5439	5/16" - 18 x 3/4" Cap Screw
36	VSB130	5/16" Flat Cut Washer
37	TU2814	5/16" Split Lockwasher
38	C249	5/16" - 18 Hex Nut
39	TU3124	3/8" - 16 x 3/4" Cap Screw
40	RC347	1/2" - 13 x 1/4" Cap Screw
41	TU1851	1/2" Cut Washer
42	TU2831	1/2" Lockwasher
43	TU4787	3/8" - 16 Hex Nut
44	VSB134	3/8" Lockwasher
45	IB140	3/8" Cut Washer
46	TU3211	3/8" - 16 x 2-1/2" Level Bolts
47	TU4937	3/8" - 16 x 3/4" Cap Screw
48	TU13463	Relay - 9A, 3 Pole w/Aux.
	TU13516	Relay - 12A, 3 Pole w/Aux.
49		Reversing Control Box (3 Ph. ONLY)
50	TU13408	Round Set Screw

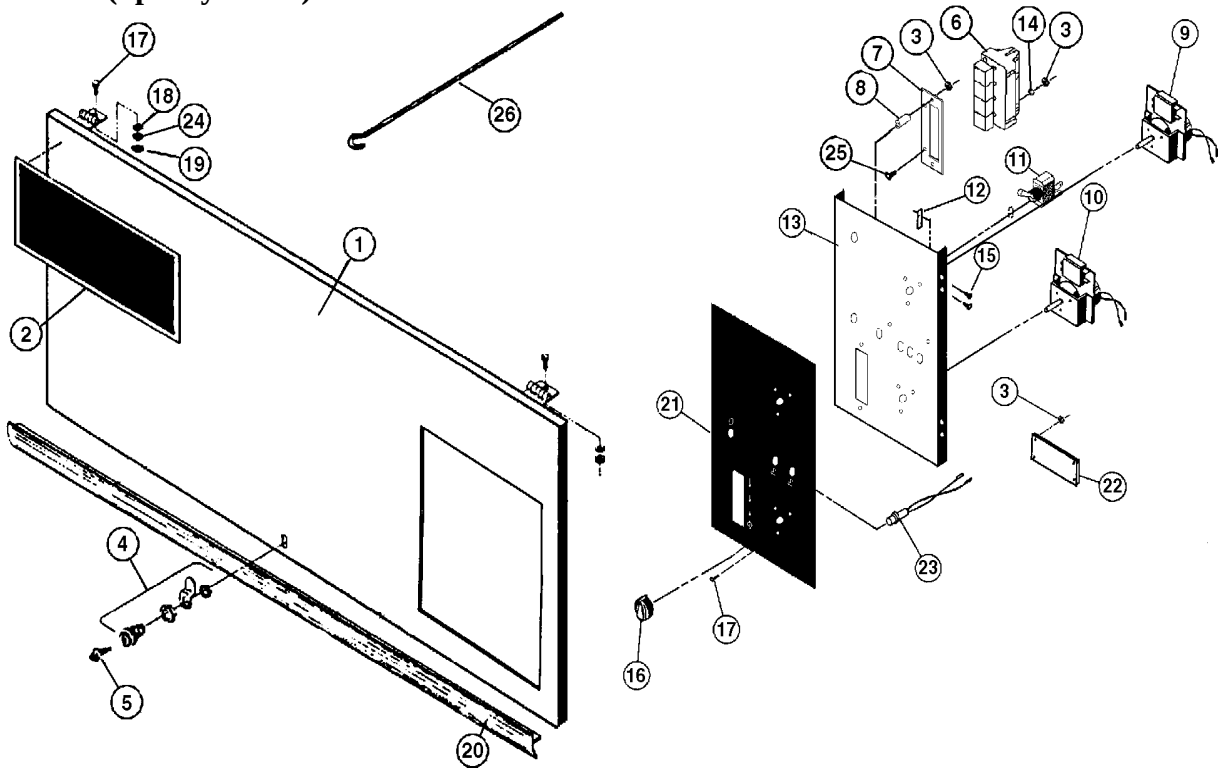


1	TU13147	Bearing Support Bracket
2	OP233	1/2" Hex Nut (pkg 6)
3	TU2831	1/2" Lockwasher (pkg 6)
4	TU2883	1/2" Flat Washer (pkg 6)
5	TU10850	Flange Bearing
6	TU2195	1/2" - 13 x 1-3/4" Cap Screw (pkg 6)
7	TU10676	Pillow Block Bearing
8	OP251	1/2" I.T. Lockwasher (pkg 6)
9	RC347	1/2" - 13 x 1-1/4" Cap Screw (pkg 6)
10	TU13372	1/2" Hex Nut - Nylok
11	TU10644	3/8" - 16 x 1/2" Nylok Set Screw (pkg 6)



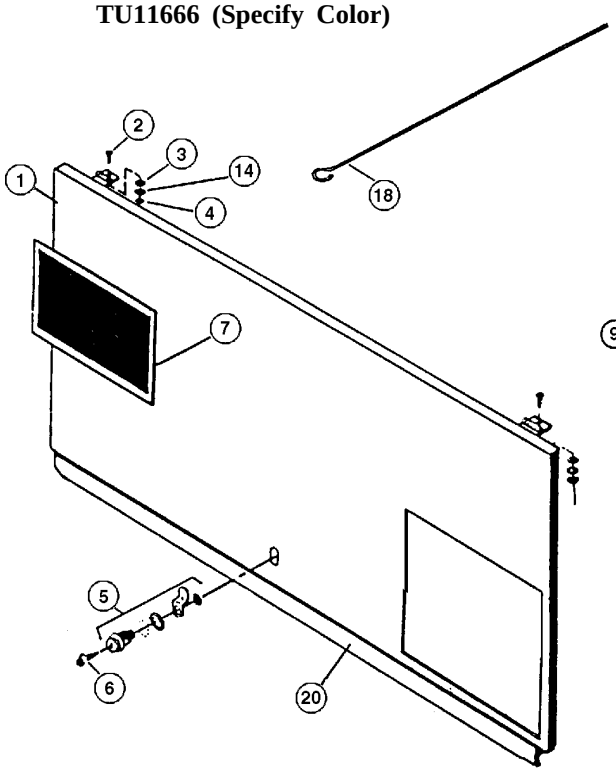
			Quantity
1	TM103	Housing	1
2	TM104	Small Seal	1
3	TM105	Small Open End Cap	1
4	TM108	Small Bearing Cup & Cone	2
6	TM101	Worm 1-1/2" x 7-1/8"	1
7	TM110	Large Bearing Cup & Cone	2
8	TM112	Large End Cap	1
9	TM115	1/4" Pipe Plug	1
11	TM102	Worm Gear	1
12	TM120	Oil Seal	2
13	TU2623	Cap Screw 3/8" - 16 x 1-1/""	4
14	TU2839	Cap Screw 1/4" - 20 x 7/8"	8
15	TM121	Vent Plug 1/4" NPT	1
16	RC349	1/4" Internal Tooth Lockwasher	8
17	TM118	Small Closed End Cap	1
	TU3465	Transmission oil (Not Shown)	1

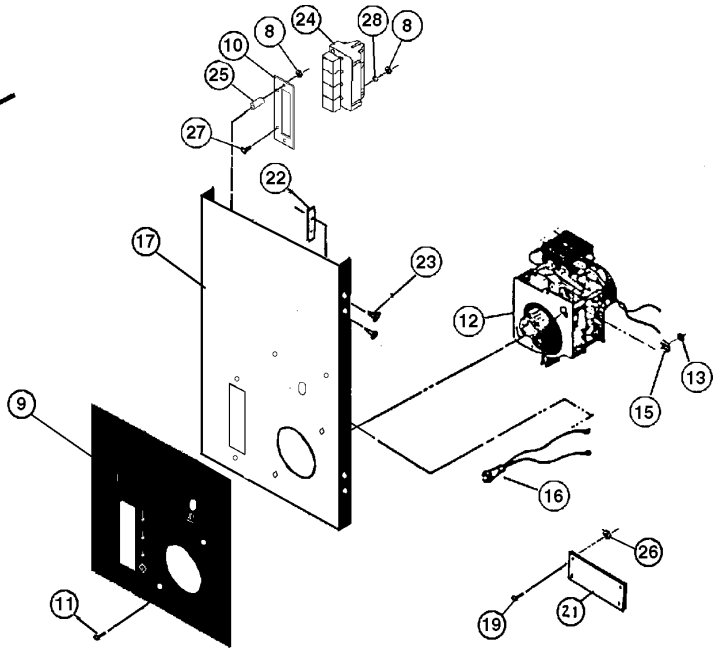
Access Door Assembly
Ref. Nos. 1,2,4,5,20,26
TU13887 (Specify Color)



1	TU13939	Access Door W/A (Specify Color)
2	TU8013	Cissell Nameplate
3	TU3400	Nut
4	TU4822	Lock #3186
5	TU2844	Key JWC2
6	TU11510	Push Button Switch
7	TUT191A	Push Button Switch Plate
8	TU13942	Spacer
9	TU12932	Timer, 24V, 0-60 Minutes
10	TU12933	Timer, 24V, 0-15 Minutes
11	FG147	Toggle Switch
12	TU1771	Twin Nut (Pkg 12)
13	TU13856	Control Panel Plate Asm.
14	M271	#8 Int. Tooth Lockwasher
15	TU9524	#6 x 5/16" Screw
16	TU2555	Timer Knob
17	TU3479	#10 - 32 x 7/16" Truss Head Screw
18	P104	1/4” Cut Washer
19	TU2842	#10 - 32 Hex Nut
20	TU7983	Upper Front Trim
21	TU13814	Control Panel Nameplate (N/Rev.)
	TU13816	Control Panel Nameplate (Rev.)
22	TU8629	Terminal Board
23	TUT316	Pilot Light - 24V
24	FB187	#10 Lockwasher
25	SV136	#6-32 x 15/16" Truss Head Screw
26	TU5739	Support Rod

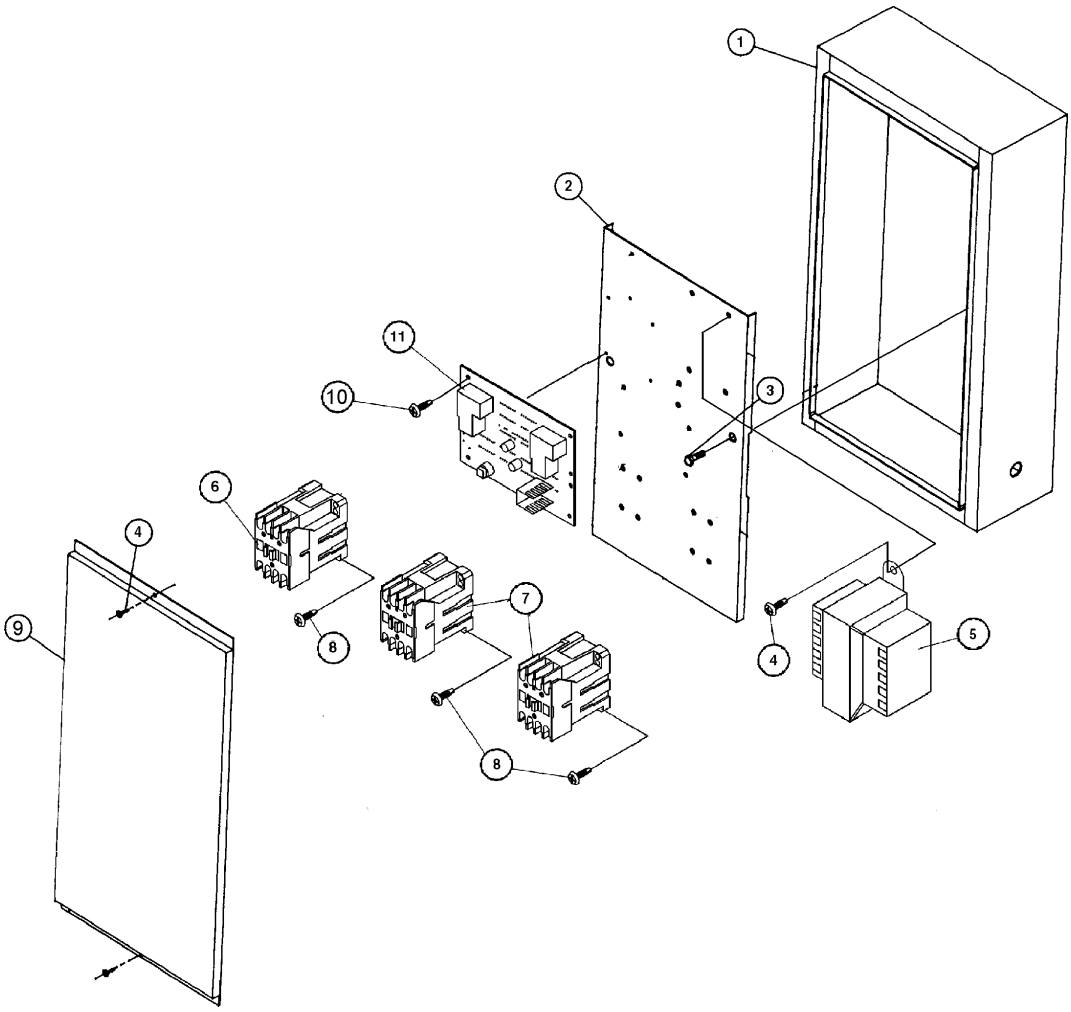
Access Door Assembly
Ref. Nos. 1,5-7, 18, 20
TU11666 (Specify Color)





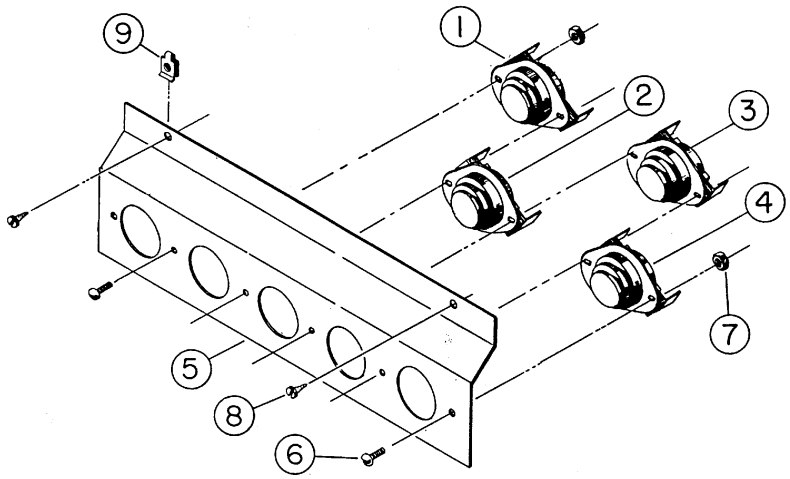
Control Panel Assembly
Ref. Nos. 9-17, 22-25
TU13721 - 24V 50/60 Hz. Gas
TU13847 - 24V 50/60 Hz. S/E

1	TU11659	Access Door Weldment
2	TU3479	#10-32 x 7/16" Truss Head Screw
3	P104	1/4" Cut Washer
4	TU2842	#10-32 Hex Nut
5	TU4822	Lock-JWC2
6	TU2844	Key - JWC2
7	TU8013	Cissell Nameplate
8	TU3400	Nut
9	TU13843	Control Panel Nameplate
10	TUT191A	Push Button Switch Plate
11	TU4958	#8-32 x 3/8" Machine Screw
12	- - - - -	Coin Meter (Specify Voltage, Coin Denomination, Single or Double Slot)
13	TU3266	#8-32 x 11/32" Hex Nut
14	FB187	#10 Lockwasher
15	P104	1/4" Cut Washer
16	TUT316	Indicator Lamp—24V
17	TU13858	Control Panel Plate Asm.
18	TU5739	Support Rod
19	M262	Screw
20	TU7983	Chrome Trim
21	TU8629	Terminal Board
22	TU1771	Twin Clip (Pkg 12)
23	TU9524	#6 x 5/16" Screw
24	TU11510	Push Button Switch
25	TU13942	Spacer
26	TU3266	Nut
27	SV136	#6-32 x 15/16" Truss Head Scr.
28	M271	#8 - Int. Tooth Lockwasher

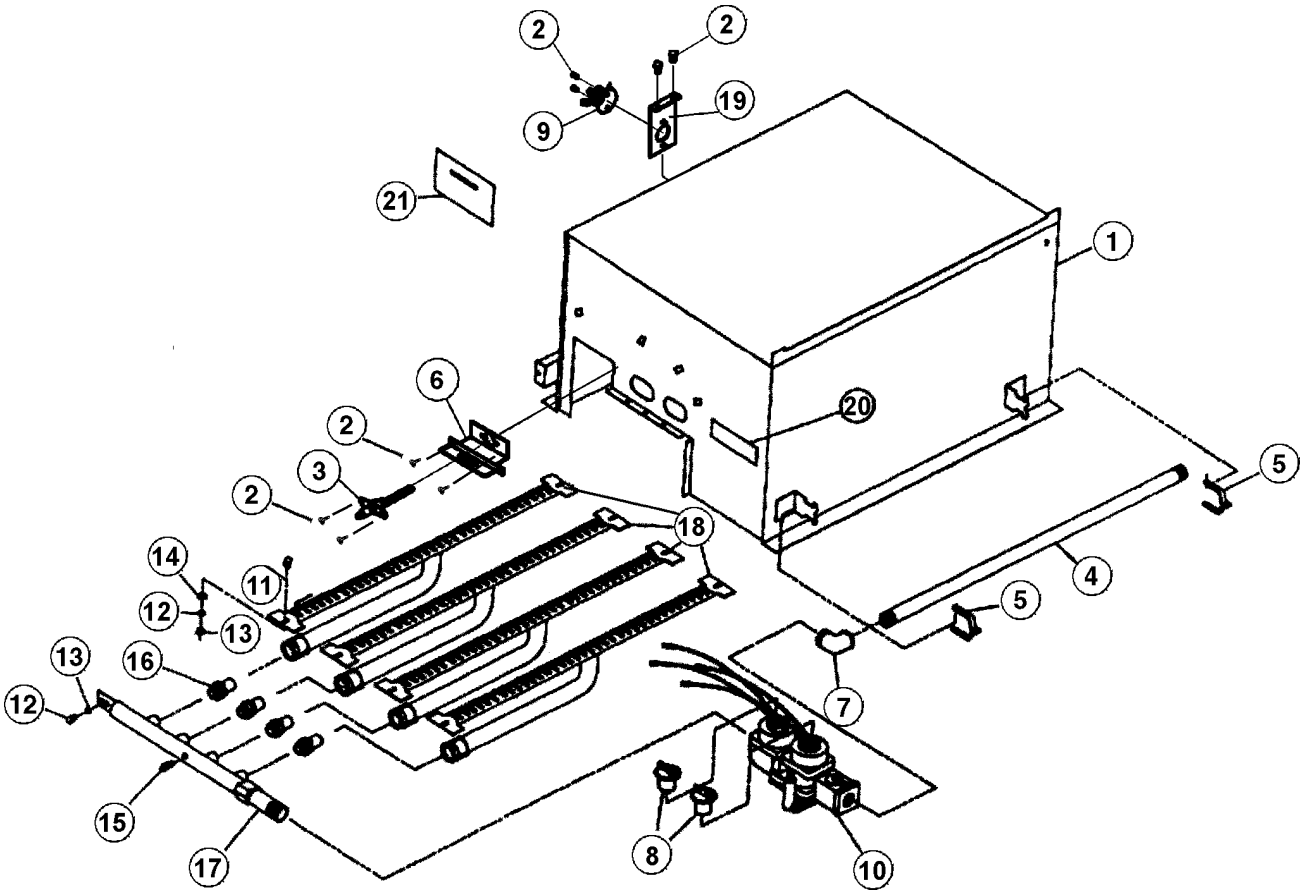


1	TU9374	Reversing Control Box W/A
2	TU13700	Control Panel Plate
3	RC344	1/4" - 20 x 3/4" Hex Head Screw
4	TU7733	#8 - 18 x 1/2" Self Drill Screw (Pkg 6)
5	TU13480	Transformer, 200-240V/24V w/Reset
6	TU13516	Contactor, 24V
7	TU13526	Contactor Assembly, 24V Reversing
8	TU2793	#8 - 18 x 3/4" Self Drill Screw (Pkg 6)
9	TU14118	Box Cover Plate
10	F540	#6 x 5/8" Phillips Head Screw
11	TU12874	Timer, Solid State Reversing

1	TU3240H	Safety High Limit Thermostat
2	TU3240H	185°F Thermostat
3	TU5150H	150°F Thermostat
4	TU7244H	135°F Thermostat
5	TU5143	Mounting Bracket
6	TU3624	#6-32 x 1/4" Round Head Screw (6 each)
7	TU3400	#6-32 Hex Nut
8	TU7733	#8 x 1/2" Self Drill Screw
9	TU6067	#8 Speed Clip (2 each)

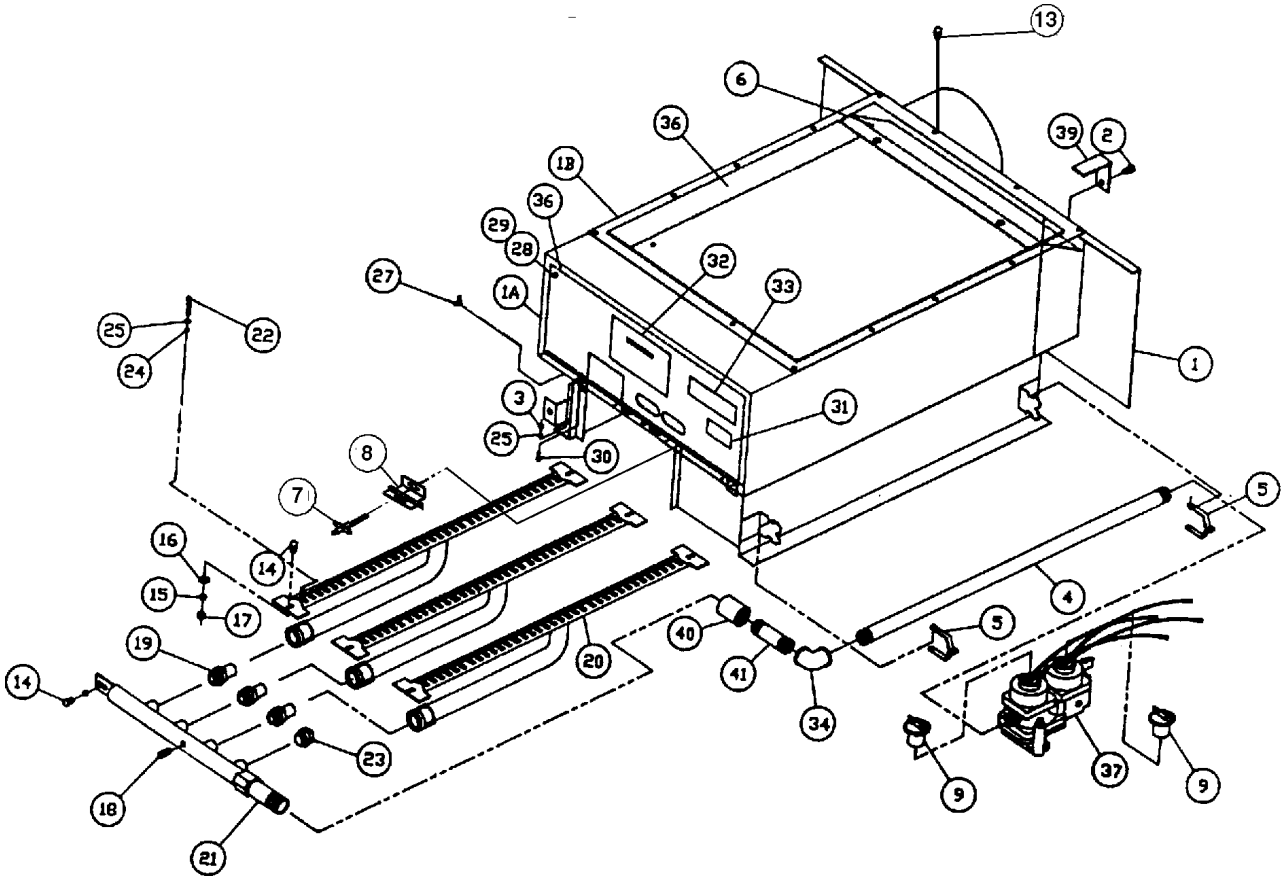


GAS BONNET ASSEMBLY - TU13675 (Natural Gas) DSI
GAS BONNET ASSEMBLY - TU13716 (LP Gas) DSI



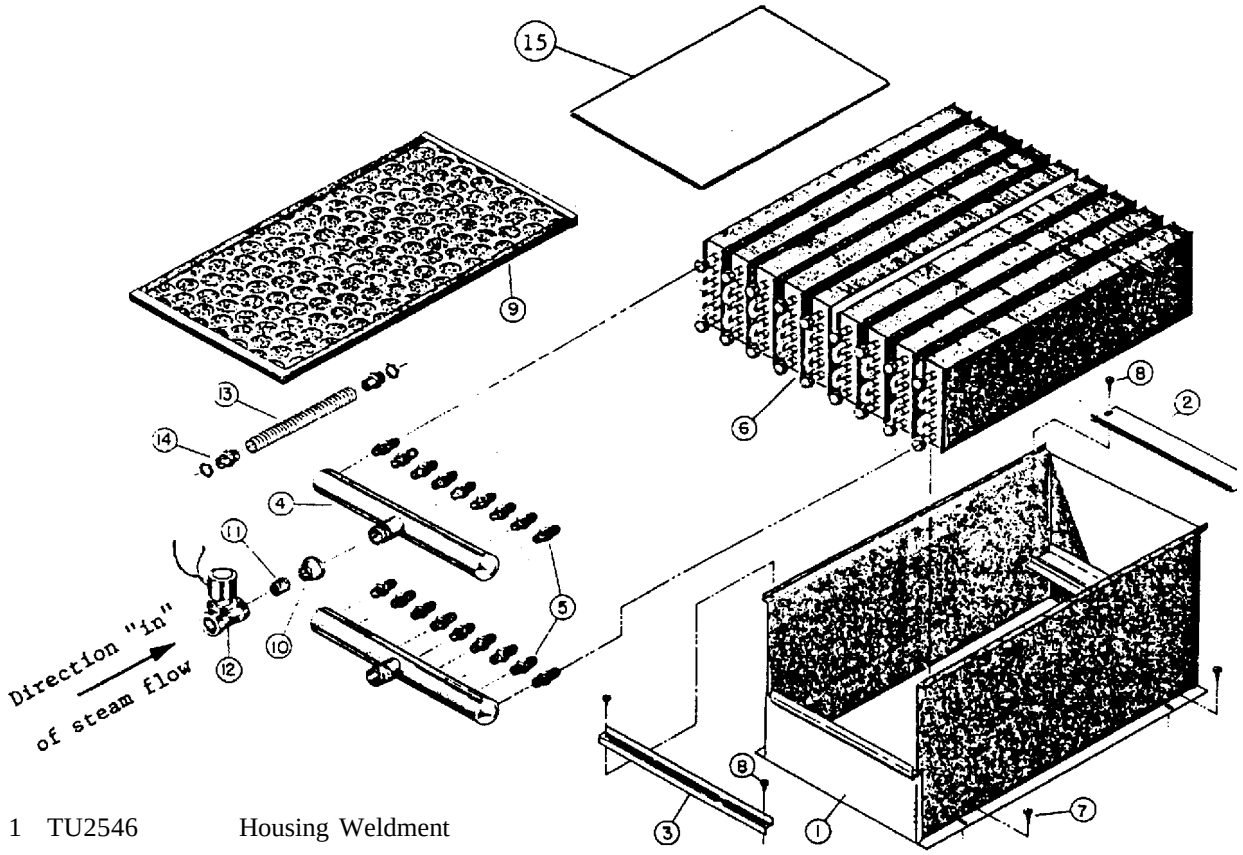
1	TU8683	Bonnet			
2	TU7733	#8 - 18 x 1/2" Self Drill Screw (Pkg. of 6)	12	TU2846	1/4" Split Lockwasher
			13	TU4934	1/4" - 20 Hex Nut
3	GA-00764-0	Electrode Spark Igniter	14	TU2847	1/4" Flat Washer
4	TU13212	1/2" Pipe Nipple 24"	15	TU2224	1/8" Pipe Plug
5	TU2226	Manifold Mounting Bracket	16	TU3539	Gas Burner Orifice (Specify Size)
6	TU13826	Electrode Spark Mounting Bracket	17	TU8288	Manifold Assembly
7	OP291	1/2" Elbow (Street)	18	TU7840	Burner
8	C1365	Connector T & B	19	TU13695	Bonnet Thermostat Bracket
9	TU13678	Thermostat, Man. Reset 300°	20	TU8645	Installation Instructions
10	TU13523	1/2" Combination Gas Valve (Natural Gas)	21	---------	Spark Ignition Instructions
	TU13513	1/2" Combination Gas Valve (LP Gas)			
11	CB36	1/2" - 20 x 1/2" Hex Head Screw			

ENERGY-SAVER GAS BONNET - TU13787 (Natural Gas)
ENERGY-SAVER GAS BONNET - TU13788 (LP Gas)



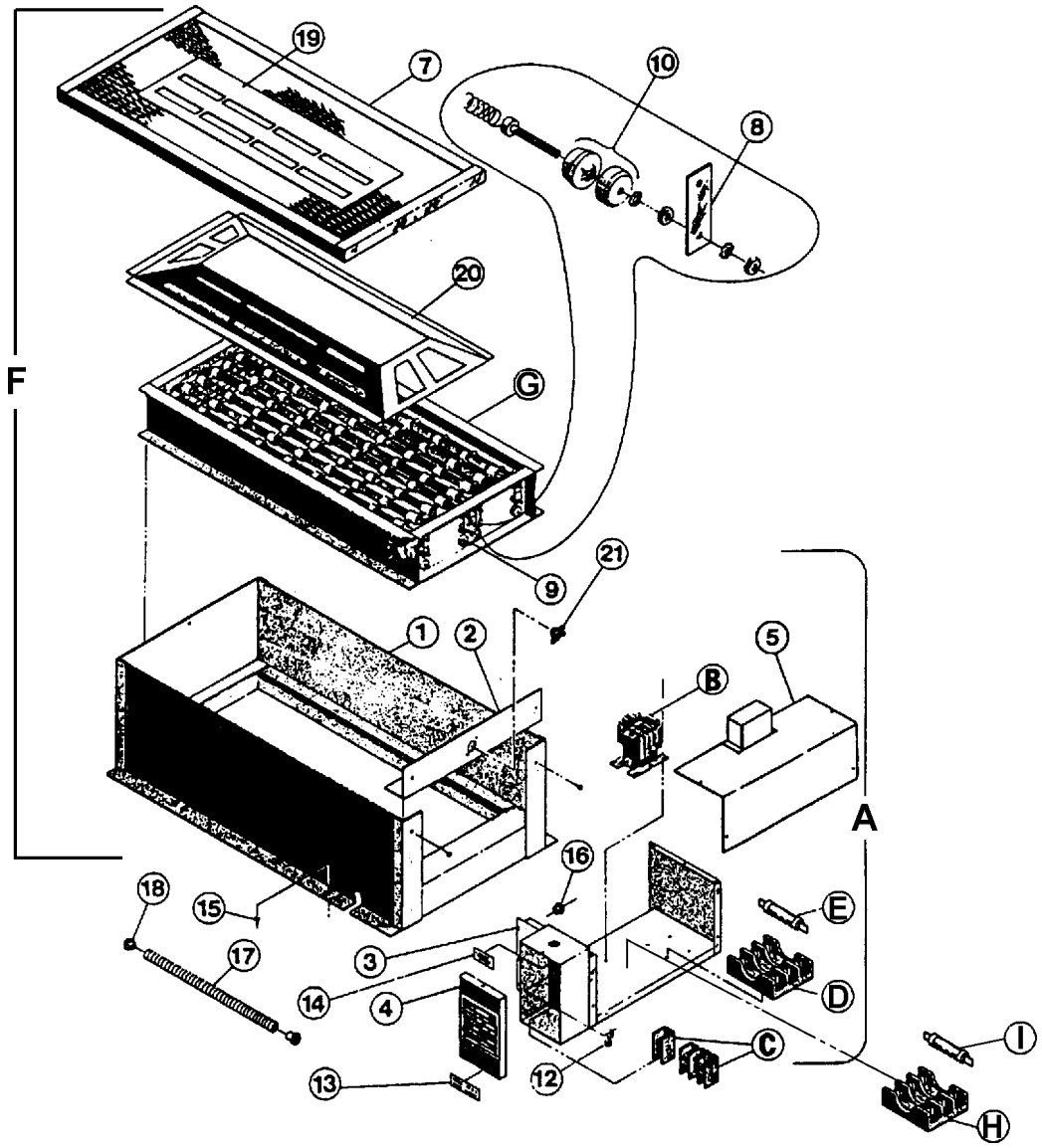
1	TU8697	"F" Bonnet
1A	TU8561	Front Plate Hinge
1B	TU7787	Top Panel
2	TU7733	#8 x 1/2" Self Drill Screw (Pkg. of 6)
3	TU2842	#10 - 32 Hex Nut
4	TU13212	Pipe Nipple 1/2" x 24"
5	TU2226	Manifold Mount, Bracket
6	TU7294	Upper Rear Air Deflector
7	GA-00764-0	Electrode Spark Igniter
8	TU13826	Electrode Spark Mounting Plate
9	C1365	Connector T & B (Gas Valve)
10	TU8690	Igniter Mounting Plate
11	TU7373	Clean Out Panel Nameplate
13	TU7733	#8 Self Drill Screw (Pkg. of 6)
14	CB36	1/4" - 20 x 1/2" Hex Head Screw
15	TU2846	1/4" Split Lockwasher
16	TU2847	1/4" Flat Washer
17	TU4934	1/4" - 20 Hex Nut
18	TU2224	1/8" Pipe Plug
19	TU3539	Gas Burner Orifice (Specify Size)
20	TU7840	Burner
21	TU8288	Manifold Assembly
22	TU3416	#8 x 1-1/4" Sheet Metal Screw
23	TU10946	Plug
24	M271	Lockwasher
25	P104	1/4" Cut Washer Brass
27	TU10292	Wing Nut
28	TU2877	#10 Tinnerman Nut
29	TU2878	#10 x 5/8" Sheet Metal Screw
30	TU3479	#10 - 32 x 7/16" Truss Head Screw
32	TU13914	Gas Rating Plate
33	TU8645	Installation Instructions
34	390501053	1/2" Elbow
35	TU3266	#8 - 32 Hex Nut
36	TU2853	Gasket
37	TU13523	1/2" Combination Gas Valve (Natural Gas)
	TU13513	1/2" Combination Gas Valve (LP Gas)
39	TU11181	Burner Locator Angle
40	SC505	1/2" Coupling
41	390401021	1/2" x 2-1/2" Nipple

TU13689—9 Section Steam Bonnet Assembly w/Solenoid Valve 24V



1	TU2546	Housing Weldment
2	TU2547	Front Coil Retainer
3	TU2548	Rear Coil Retainer
4	TU2413	Steam Coil Manifold
5	TU2414	3/4" - 16 x 3/8" Straight Connector
6	TU2405	Steam Coil (9 required) 7 3/4" W x 1 5/8" H x 26" L
7	CB36	#1/4 - 20 x 1/2" Hex Head Screw (Pkg. of 6)
8	TU7733	#8 x 1/2" S.M.S. (Pkg. of 6)
9	TU2598	Air Filter 16" x 25" x 1"
10	TU2735	1" x 3/4" Reducer
11	TU4608	3/4" x 2" Pipe Nipple
12	TU13517	Solenoid Valve 24V - 50/60 Hz.
13	CFB2100	Greenfield Cable, 1/2" (Specify 21" Long)
14	TU4790	1/2" Straight Conn. (2 required)
15	TU10651	Mechanism Box Cover

Electric Heating Unit (Illustration)

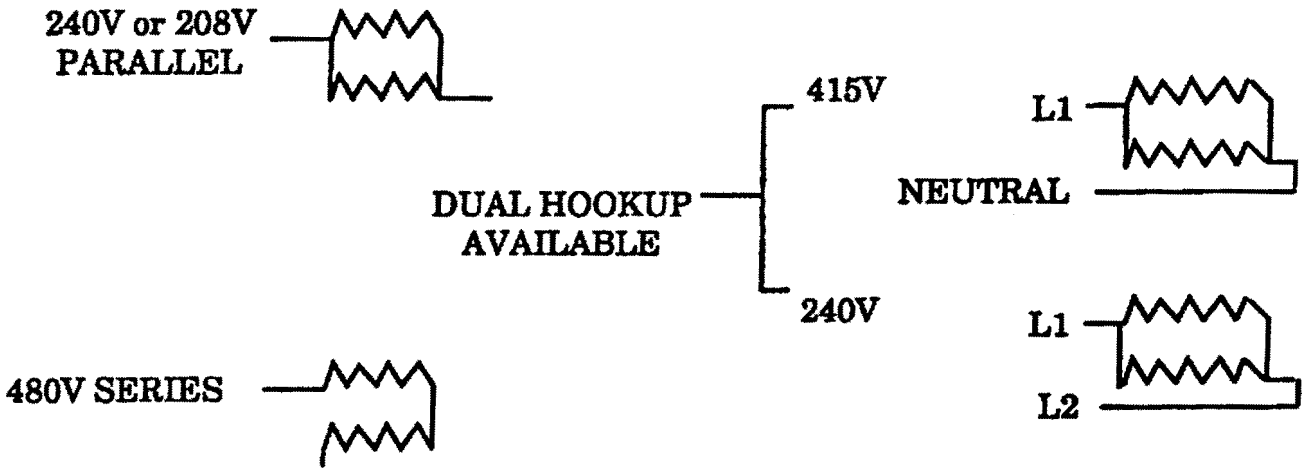


1	TU3103	Bonnet Weldment	16	TU5958	Bushing (2 required)
2	TU3102	Hold Down Plate	17	CFB0700	Cable—1/2" x 7" Lg.
3	TU9205	Control Box Weldment	18	TU4790	Straight Connector (2 required)
4	TU9207	Terminal Box Cover	19	TU10420	Cover-Inlet Baffle Weldment
5	TU12454	Top Cover	20	TU10411	Inlet Baffle Weldment
7	TU3104	Air Inlet Cover			
8	TU3767	Contact Strap (4 required)	A	see next page	Control Box Less Wiring
9	TU3768	Contact Strap (1 required)	B	"	Contactor
10	TU3253	Insulators	C	"	Terminal Block
11	TU7244H	Thermostat—135° F	D	"	Heater Fuse Block
12	TU7738	Grounding Lug	E	"	Heater Fuse
13	TU9254	High Voltage Label for 415V Only	F	"	Bonnet with Elements
			G	"	Heater Element
14	TU9258	Ground Label	H	"	Moter Fuse Holder
15	CB36	1/4"-20 x 1/2" Hex Screw (Pkg. of 6)	I	"	Motor Fuse

A	B	C	D	E	F	G	H	I
Control Box Less Wiring	**Contactor (24V Coil)**	**Terminal Block**	**Heater Fuse Block**	**Heater Fuses**	**Bonnet with Elements**	**Heater Element**	**Motor Fuse Block**	**Motor Fuses**
TU13777 208V 3PH	TU13521 45/80 AMP	TU9143	TU11096	TU7074 60 AMPS 3 required	TU7589-30KW 208V 3PH	HE10810, 240V, 40KW Used for 208V, 30KW	TU8201	TU819710 10 AMPS 3 required
TU13778 240V 3PH	TU13521 45/80 AMP	TU9143	TU11096	TU7074 60 AMPS 3 required	TU7590-30KW 240V 3PH	HE11080, 240V, 30KW	TU8201	TU819710 10 AMPS 3 required
TU13779 240/415V 3PH	TU13521 45/80 AMP	TU9143* TU9142**	TU11096	TU7074 60 AMPS 3 required	TU10395-30 KW 240V or 415V 3PH	HE11080, 240V, 30KW	TU8200	TU819908 8 AMPS 3 required
TU13780 480V 3PH	TU13520 30/45 AMP	TU9143	TU9141	TU7072 40 AMPS 3 required	TU7590-30KW 480V 3PH	HE11080, 240V, 30KW Used for 480V, 30KW	TU8200	TU819908 8 AMPS 3 required
TU13898 200-220V/ 346-380V 3PH	TU13521 45/80 AMP	TU9143* TU9142**	TU11096	TU7074 60 AMPS 3 required	TU10395-220V or 380V 3PH	HE10810, 240V, 40KW Used for 346-380V, 30KW	TU8200	TU819908 8 AMPS 3 required
TU13903 240V 3PH w/1PH motor	TU13521 45/80 AMP	TU9143	TU11096	TU7074 60 AMPS 3 required	TU7590-30KW 240V 3PH	HE11080, 240V, 30KW	TU8201	TU819710 10 AMPS 2 required

*** 3 Pole**

**** 1 Pole (Neutral)**



Rated Heater Input	Heater Amperes, Motor Amperes, Control Amperes, Total Amperes at Rated Voltage	Minimum Size Supply Wire Based On 60° (C) (140° F) Insulated Copper Conductor	Two Motor Circuit Phase	One Motor Circuit Phase	Circuit Minimum Conduit Trade Size	Circuit Minimum Conduit Trade Size
208V/3 Ph/60 Hz	89 AMPS	2 AWG	1 Ph	- - -	1-1/4	60
208V/3 Ph/60 Hz	87 AMPS	2 AWG	- - -	1 Ph	1-1/4	60
208V/3 Ph/60 Hz	87 AMPS	2 AWG	3 Ph	- - -	1-1/4	60
208V/3 Ph/60 Hz	86 AMPS	2 AWG	- - -	3 Ph	1-1/4	60
240V/3 Ph/60 Hz	78 AMPS	3 AWG	1 Ph	- - -	1-1/4	60
240V/3 Ph/60 Hz	76 AMPS	3 AWG	- - -	1 Ph	1-1/4	60
240V/3 Ph/60 Hz	76 AMPS	3 AWG	3 Ph	- - -	1-1/4	60
240V/3 Ph/60 Hz	75 AMPS	3 AWG	- - -	3 Ph	1-1/4	60
240/415V/3 Ph/50 Hz	76/44 AMPS	3/6 AWG	3 Ph	- - -	1-1/4	50
240/415V/3 Ph/50 Hz	75/43 AMPS	3/6 AWG	- - -	3 Ph	1-1/4	50
480V/3 Ph/60 Hz	38 AMPS	8 AWG	3 Ph	- - -	1	35
480V/3 Ph/60 Hz	38 AMPS	8 AWG	- - -	3 Ph	1	35
575V/3 Ph/60 Hz	33.9 AMPS	8 AWG	3 Ph	- - -	1	35